HMO Rate Analysis

1997 Spending, Unit Cost, and Utilization

August 1998

A report for the
Massachusetts Healthcare Purchaser Group
from the

Massachusetts Division of Health Care Finance and Policy
Executive Office of Health and Human Services
Commonwealth of Massachusetts

Executive Summary

A few years ago, the Massachusetts Healthcare Purchaser Group (MHPG) and the Division of Health Care Finance and Policy (DHCFP) began discussing production of a report that would help many Massachusetts employer-based purchasers of health insurance understand how HMOs spend their premium dollars. The result of those discussions was *HMO Rate Analysis*, produced by the Division using 1995 data and distributed to MHPG members in June of 1997. This second publication analyzes spending, unit cost and utilization data for calendar year 1997 for most of the HMOs with members in Massachusetts.

The objective of this study is to provide purchasers with an understanding of how HMO premium dollars are spent and how differences in spending reflect differences in unit cost and utilization. By highlighting areas with the greatest variation in spending, the report allows purchasers to identify issues for discussion during annual HMO contract negotiations. Following is a summary of principle findings.

High Medical and Low Non-Medical Spending

HMOs in Massachusetts have among the highest levels of medical spending in the country (15% above the national average of $110 per member per month), but one of the lowest levels of non-medical spending (2% below the national average of $19 per member per month). HMO medical spending in Massachusetts increased 3.1% in 1997, while non-medical expenditures fell 3.2%. (Regional comparisons cited in the report come from Milliman and Roberston's 1997 *HMO Intercompany Rate Survey*.)

Low Inpatient Costs

HMOs in Massachusetts have among the lowest inpatient acute care facility costs per day in the country (16% below the national average of $1,283), suggesting that the Commonwealth's high penetration of managed care plans may have helped to keep hospital prices down. However, the inpatient facility cost increase of 3.6% in 1997 indicates that hospitals may be gaining greater leverage in HMO contract negotiations.

Low Hospital Admission Rates but Longer Lengths of Stay

Massachusetts HMOs have low hospital admission rates relative to the rest of the country (10% below the national average of 67 per 1,000 members), but longer lengths of hospital stay (10% above the national average of 247 days per 1,000 members). Managed care plans may have been successful in lowering the rate of admissions in the state. However, they appear less capable of reducing the amount of time each patient stays in the hospital after admission, a decision over which hospitals may have more control.

Professional Service Is Largest Spending Component

The largest component of HMO spending is for professional services (both inpatient and outpatient). Professional services accounted for one-third of overall HMO ex-

penditures in 1997. Moreover, of the major medical spending categories, professional fees increased the most and exhibited the greatest degree of variation. Thus, during rate negotiations, purchasers may want to ask HMOs how they reimburse doctors and approve specialist referrals.

Second Largest Spending Component Is Outpatient Facility Cost

The second largest component of HMO spending is outpatient facility costs, representing almost one-quarter of total HMO expenditures. The relatively high share of total spending attributable to outpatient facilities reflects the traditional emphasis by HMOs on ambulatory over inpatient care. Variation in outpatient spending among HMOs appears to be related more to differences in unit costs than in utilization. Outpatient facility costs per day ranged from a low of $283 to a high of $1,207. Outpatient visits per 1,000 members varied from a low of 1,793 to a high of 7,976.

Inpatient Facility Spending Impacted by Utilization

Inpatient facility spending accounts for roughly 20% of total HMO expenditures and increased 3.6% in 1997. Differences in inpatient facility spending appear to be related more to differences in utilization than in unit costs. Inpatient unit costs ranged from a low of $1,108 to a high of $1,516. Inpatient admissions per 1,000 members varied from a low of 51 to a high of 87.

Rate of Increase Is Higher for Pharmacy Costs

Though a relatively small share of total expenditures, pharmacy costs increased more than any other spending category. HMOs' prescription-related spending rose 6.4% in 1997 (measured over all member months). Prescription costs (excluding co-payments) also exhibited the most variation, ranging from a low of almost $14 to a high of over $33 when measured over members with pharmacy benefits. Given the wide variation in drug spending, purchasers may want to raise the issue of prescription benefits in their rate negotiations with HMOs.

Administrative Costs Vary Most

Finally, most of the variation in total spending between HMOs relates to differences in non-medical expenditures. The largest component of non-medical spending is administrative expenses. Administrative spending per member per month ranged from a low of $10 to a high of $36. Purchasers may want to ask HMOs about their administrative expenses during rate negotiations.

Although this report addresses only fully-insured commercial HMO enrollees, it is important to keep in mind that it does not account for potential differences in the health care needs of each HMO's membership. Nor does it adjust for differences in member benefits. As a result, relatively high levels of medical spending may mean that an HMO is managing care less effectively. However, it may also indicate a membership population with greater health care needs or a more generous benefits package. This report is not meant to serve as a 'report card' for individual health plans. Rather, the report is intended to provide purchasers with information necessary for informed discussions with health plans during contract negotiations.

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Table of Contents

Acknowledgments

We thank the participating HMOs for contributing financial and enrollment data in support of this study. This report would not have been possible without their cooperation. We also acknowledge the assistance of Paula Breslin, Executive Director of the Massachusetts Healthcare Purchaser Group.

Invaluable guidance was provided by Amy Simms, author of the June 1997 Division of Health Care Finance and Policy publication, *HMO Rate Analysis*. We are also grateful to other Division staff members who commented on various drafts of this report.

Finally, in a study of this nature, our sincere gratitude goes to Central Reprographics in the Commonwealth of Massachusetts Operational Services Division. Central Reprographics Manager Edward Goba and his staff were handed the daunting task of publishing this report within a very short period of time, and they succeeded admirably. Many thanks to one and all.

Division of Health Care Finance and Policy
Two Boylston Street
Boston, Massachusetts 02116

(617) 988-3100 (Phone)
(617) 727-7662 (Fax)

Staff for this Report

Primary Authors: Sarah Kerr Iselin and Boyd Gilman

Layout, Design, Editing & Distribution: Dorothy Barron, Melissa Hamlet, Harry O. Lohr, Jr., and Heather Shannon

HMO Rate Analysis: 1997 Spending, Unit Cost and Utilization

Chapter 1: Introduction

HMO Rate Analysis: 1997 Spending, Unit Cost and Utilization is the second annual report by the Massachusetts Division of Health Care Finance and Policy (DHCFP) on the costs and service utilization of the major health maintenance organizations (HMOs) operating in the Commonwealth. The study was commissioned by the Massachusetts Healthcare Purchaser Group (MHPG) to assist their members in their annual rate negotiations by helping them understand how HMOs spend their premium dollars. Purchasers will be able use the information contained in this publication to ask HMOs informed questions about how they manage the care delivered to their members.

This report presents standardized measures that allow the reader to make fair and accurate comparisons across HMOs. However, the report is not designed as a "report card." We make no attempt to rank or score HMOs, and none of the measures is intended to stand alone as an indicator of performance or quality. The purpose of this report is to help purchasers understand HMO spending and to relate those differences to variation in both utilization and costs. Understanding the foundation for HMO rate calculations will allow purchasers to ask more knowledgeable questions about the adjustments used to arrive at specific premiums during the contract renewal process.

How to Use This Report

The basic unit of analysis used in this report is the amount of money that HMOs spend per member per month (PMPM). Throughout this report, total HMO spending PMPM is first disaggregated into two main categories: medical and non-medical. Medical spending is further decomposed into inpatient facility, outpatient facility, professional services, and pharmacy. The four medical spending categories are subdivided into medical/surgical, maternity/sick newborn, and mental health/substance abuse (in the case of inpatient services) and ambulatory surgery, emergency department, radiology and laboratory (in the case of outpatient services). Non-medical spending is divided into three major categories: administration (including member services, provider relations, marketing/advertising, claims processing and information systems); surplus (or net income); and other (including reinsurance, provisions for taxes and interest income credits). The spending categories analyzed in this report are detailed in Figure 1.1 on page 2.

Differences in spending PMPM between individual HMOs can result from either changes in the utilization of health care services per member per month or changes in the unit costs of each service. The relationship of spending to unit cost and utilization is depicted in Figure 1.2 below. For example, higher inpatient spending PMPM at HMO A compared to HMO B may indicate that HMO A had higher rates of hospital admissions or longer inpatient lengths of stay per admission. Alternatively, it might indicate that the average cost of admissions from HMO A was higher than the average cost of admissions from HMO B. Higher costs and utilization may stem from several factors: differences in

Components of HMO Spending

Spending Category	Definition
Medical Spending	
Inpatient Medical/Surgical Maternity/Sick Newborns Mental Health/Chemical Dependency Other Inpatient	Acute and non-acute inpatient facility expenses, including inpatient mental health/chemical dependency services at acute and specialty hospitals, inpatient rehabilitation services, skilled nursing facility, hospice, long-term care facility services, and inpatient pharmacy. Excludes all professional expenses.
Outpatient Ambulatory Surgery Emergency Department Radiology Laboratory Other Outpatient	Outpatient facility expenses, including radiology, laboratory, ambulatory surgery procedures and emergency department facility expenses excluding those that result in an inpatient stay. Includes the facility component of all other non-inpatient, non-pharmacy medical services such as mental health/chemical dependency day treatment, durable medical equipment, hospital outpatient services, and other outpatient services (e.g., dental, vision, fitness). Excludes all professional expenses.
Professional Medical/Surgical Mental Health/Chemical Dependency Other Professional	All professional expenses associated with the delivery of inpatient and outpatient services by providers practicing in primary care, medical/surgical, maternity, mental health/chemical dependency and all specialties, including MDs, RNs, LICSWs, therapists (speech, PT, OT), etc. Includes cost of visits to providers with capitated contracts.
Pharmacy	Pharmacy expenses. Excludes inpatient pharmacy expenses.
Non-Medical Spending	
Administration Advertising, Claims Processing, Information Systems, Marketing, Member Services, Provider Relations, and Other Administration	General and administrative services.
Surplus	Reserves, surplus and returns to shareholders.
Other Non-Medical	Reinsurance and expenses which may include federal income taxes and state premium tax.

Figure 1.1

member acuity (admissions from HMO A were sicker than HMO B), differences in admitting facilities (HMO A makes more frequent use of less efficient hospitals than HMO B), or differences in contracts (HMO A was less successful in negotiating lower prices with providers than HMO B).

To help explain differences among HMOs, this report provides information on utilization and unit costs for each major service category. Utilization of outpatient services is defined as number of visits. Utilization of inpatient services includes both hospital admissions and lengths of stay. The study does not attempt to explain variations in utilization rates or unit costs among HMOs.

This report is similar to the first HMO rate analysis report produced by the Division of Health Care Finance and Policy. However, the material has been reorganized to facilitate inter-HMO comparisons across service categories and to reinforce the relationship of unit cost and utilization to HMO spending. In this publication, information is organized around spending categories (rather than HMOs), beginning at the most aggregate level and working down to the most disaggregated levels described in Figure 1.1 on page 2. By showing spending amounts for each HMO on the same graph, the figures in this report illustrate differences among HMOs. To help explain these inter-HMO differences, the analysis of spending is proceeded by a review of unit cost and utilization data for the same service categories.

Participating HMOs

This report is based on responses to a Massachusetts Healthcare Purchaser Group survey submitted by 11 HMOs with members in Massachusetts. A list of the participants, along with the abbreviation used to identify each of them in subsequent figures, is presented in Figure 1.3 on page 4.

The group of participating HMOs is similar to that of the first report with a few minor changes. Harvard Community Health Plan of New England was not invited to participate because it mainly serves Rhode Island. CIGNA did not submit data because its fully-insured HMO population is extremely small. Kaiser Foundation Health Plan was unable to produce data because of systems problems. Aetna and US Healthcare have merged and submitted data for their USHC HMO product. United Health Plans of New England has withdrawn from participating in MHPG-sponsored activities.

Interpreting Changes in Spending

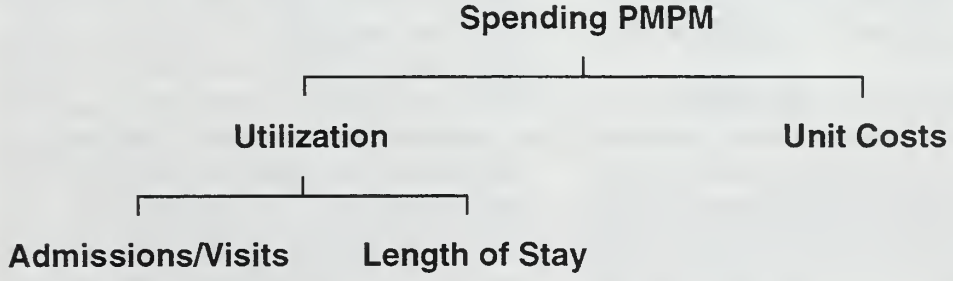


Figure 1.2

Participating HMOs

Following are the HMOs that participated in this study. The list indicates the abbreviations used to identify health plans in the graphs and tables throughout this report.

Full Health Plan Name	Abbreviation
Aetna U.S. Health Care	Aetna USHC
Community Health Plan	CHP
Fallon Community Health Plans	FALLON
Harvard Pilgrim Health Care-Harvard	HPHC-Har
Harvard Pilgrim Health Care-Pilgrim	HPHC-Pil
Health New England	HNE
Healthsource Massachusetts	HS-MA
Healthsource New Hampshire	HS-NH
Matthew Thornton Health Plan	MTHP
Neighborhood Health Plan	NHP
Tufts Associated Health Plans	Tufts

Figure 1.3

HMO Enrollment

Each HMO submitted spending, utilization, unit cost and enrollment data on their fully-insured commercial membership in Massachusetts. Members covered under Medicare, Medicaid and self-insured plans are excluded. Fully insured, commercial HMO enrollment in Massachusetts is highly concentrated among a small number of large HMOs.

According to the data presented in Figures 1.4 and 1.5 on page 5, almost 30% were enrolled in Harvard Pilgrim Health Care, with nearly 600,000 members. (HPHC amounts are based only on the legacy products that existed prior to the merger of Pilgrim and Harvard Community Plans. Financial and enrollment data for contracts written under their new integrated plan were not provided. The decline in the 1997 enrollment figures thus reflects the decision by HPHC to shift enrollees into the integrated product as contracts are renewed.) Another 25% are enrolled in HMO Blue, with an estimated 516,867 members. (Although HMO Blue is not included in the financial analysis, their membership data are presented to illustrate their importance in the Massachusetts HMO market.) The other two major HMOs are Tufts Associated Health Plans and Fallon Community Health Plans, representing 22% and 7% of reported enrollment, respectively. Most of the remaining HMOs account for very small shares of the fully-insured, commercial HMO market in Massachusetts.

The size of an HMO's membership base is important for several reasons. First, smaller

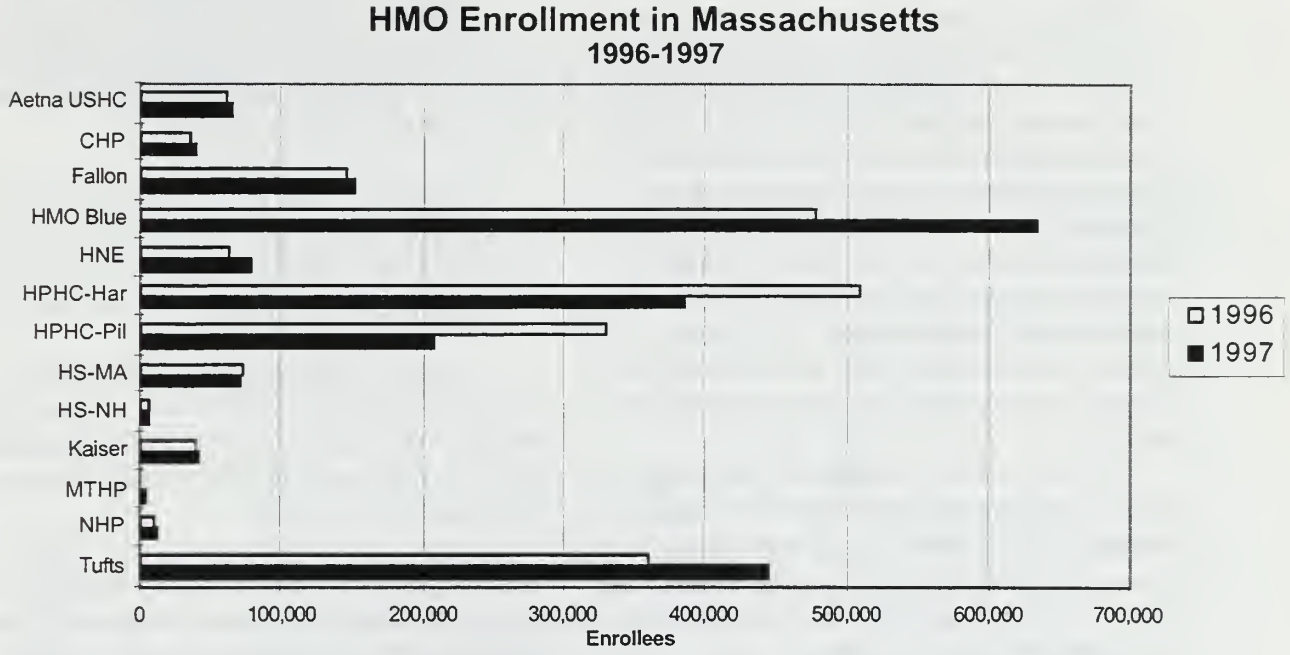


Figure 1.4

Mass. Enrollment and Market Share

	1996		1997		%
	Enrollment	Share	Enrollment	Share	Change
Aetna USHC	58,336	2.8%	63,860	3.2%	9.5%
CHP	34,959	1.7%	37,928	1.9%	8.5%
Fallon	145,483	6.9%	150,438	7.5%	3.4%
HMO Blue *	476,729	22.7%	516,867	25.8%	8.4%
HNE	61,404	2.9%	75,765	3.8%	23.4%
HPHC-Har **	509,780	24.3%	385,133	19.2%	-24.5%
HPHC-Pil **	327,533	15.6%	206,142	10.3%	-37.1%
HS-MA	71,431	3.4%	68,555	3.4%	-4.0%
HS-NH	6,504	0.3%	5,092	0.3%	-21.7%
Kaiser	38,181	1.8%	39,776	2.0%	4.2%
MTHP	2,574	0.1%	2,965	0.1%	15.2%
NHP	9,354	0.4%	10,631	0.5%	13.7%
Tufts	358,585	17.1%	444,048	22.1%	23.8%
Total	**2,100,853**	**100.0%**	**2,007,200**	**100.0%**	**-4.5%**

Reflects fully-insured commercial HMO membership in Massachusetts.
Excludes Medicare, Medicaid and self-insured products.

* 1997 HMO Blue enrollment level derived from Division of Insurance 3rd quarter 1997 filings. 1996 enrollment level represents an average between 1995 survey response and 3rd quarter 1997 enrollment.

** HPHC Harvard and Pilgrim product enrollment data reflect shift from legacy products into new HPHC integrated product. Enrollment data for integrated product not available.

Figure 1.5

HMOs might show greater variation, particularly for some of the more disaggregated measures, because they have fewer members. Larger numbers of observations tend to smooth out results. Second, the simple HMO sector averages presented in Chapter 2 through Chapter 4 have not been adjusted for differences in market share. We felt that weighting each HMO average by its market share would inappropriately influence the sector-wide averages toward the one or two largest HMOs, and wanted to avoid this effect.

Finally, HMO behavior is itself a function of the structure of the market. A highly concentrated market sometimes creates an industry leader who sets the standard against which smaller HMOs measure themselves. To compete with the leader, other HMOs may model their business practices on the leader. This modeling phenomenon would show up in our data as unusually narrow ranges of values.

The remainder of *HMO Rate Analysis: 1997 Spending, Unit Cost and Utilization* is divided into four major sections and two appendices.

Chapter 2: Regional Comparisons compares HMO spending, unit cost and inpatient utilization in Massachusetts to nine major regions of the country.

Chapter 3: Allocation of HMO Premium Dollars provides an overview of how HMOs allocated their premium dollars in 1997 across medical and non-medical service categories.

Chapter 4: Recent Changes in the Massachusetts HMO Sector reviews the changes in average spending, unit cost and utilization across participating HMOs in Massachusetts between 1996 and 1997.

Chapter 5: 1997 HMO Rate Analysis contains the main findings of the report and analyzes 1997 spending, unit cost, and utilization by service category for each HMO.

Notes on data submission and methodological issues are discussed in Appendix A.

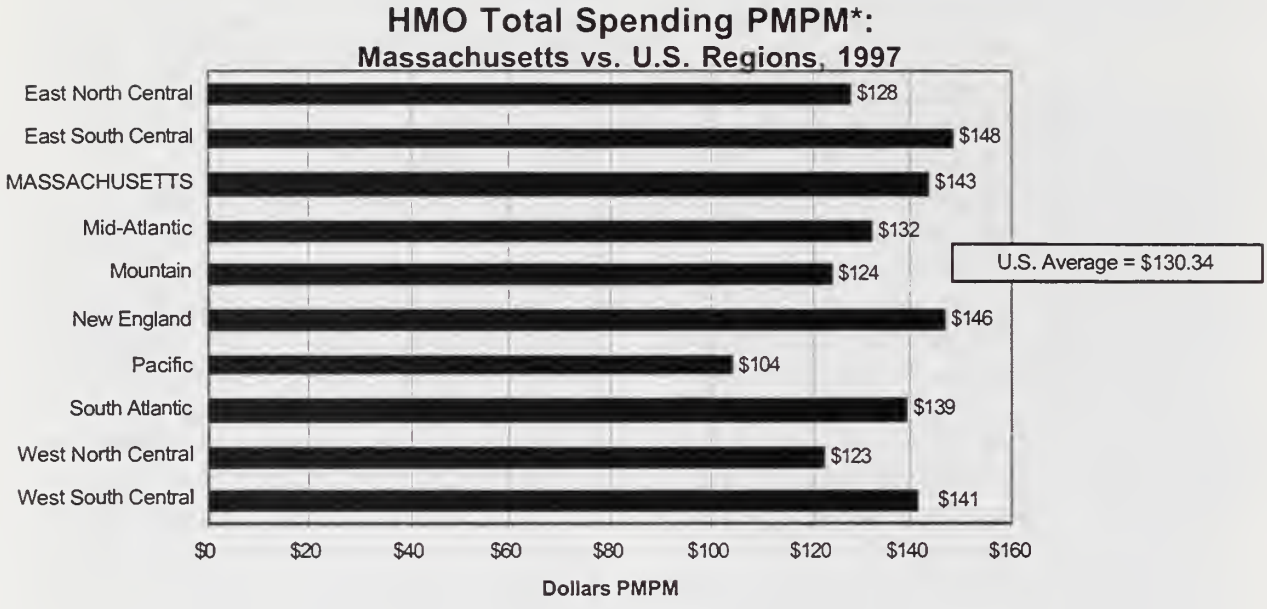
Appendix B offers summary profiles of each HMO that provide easy reference to the major spending, unit cost, utilization, and enrollment characteristics of each plan.

Chapter 2: Regional Comparisons

This chapter examines regional variation in HMO spending, utilization and unit costs in the United States, adjusted for area wage differences. Average adjusted total HMO spending in Massachusetts is 10% above the national average of $130 per member per month (see Figure 2.1 on page 8). The Massachusetts average total HMO spending PMPM exceeds all but two of the regional averages. Massachusetts HMOs spend more money on medical care as well. Figure 2.2 on page 8 shows that medical spending among HMOs in the Commonwealth is 15% above the national average of $110 PMPM. Conversely, the state's non-medical HMO spending PMPM is the fourth lowest. Figure 2.3 on page 9 shows that average non-medical HMO spending in the Commonwealth is two percent below the U.S. average of $19 PMPM.

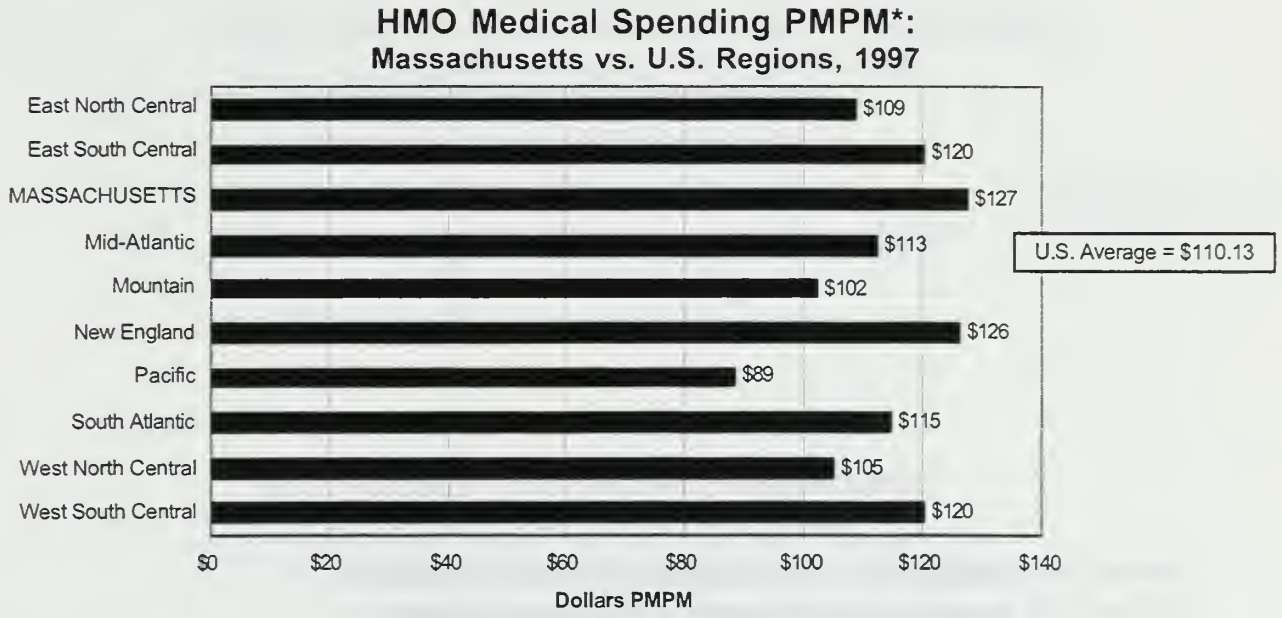
Somewhat surprising given its high HMO medical spending, Massachusetts HMO inpatient acute care cost per day is the second lowest (see Figure 2.4 on page 9). Acute care cost per day among Massachusetts HMOs is 16% below the national average of $1,283, suggesting that the state's high level of HMO medical spending is not driven by high contracted prices with HMOs. Massachusetts HMOs also exhibit one of the lowest levels of acute care hospital admissions, 10% below the national average of 66.9 admissions per 1,000 members (see Figure 2.6 on page 10). In contrast, HMOs in the Commonwealth have the second highest level of acute care inpatient days. Figure 2.5 on page 10 shows that the number of acute care inpatient days is nearly 10% above the national average of 246.6 days per 1,000 members.

The regional comparisons suggest that the high level of HMO medical spending in Massachusetts may have more to do with long lengths of inpatient stay than with either high facility fees or high rates of admissions. Long lengths of inpatient stay may, in turn, stem from either regional variations in HMO benefits or, more likely, differences in medical practices between Massachusetts providers and hospitals in other parts of the country. The fact that the proportion of total spending attributable to non-medical expenses in the state is low suggests that the Massachusetts HMO sector operates at a relatively high level of efficiency. Low non-medical spending may also reflect the non-profit status of most HMOs in Massachusetts. As discussed later in the report, all but two of the HMOs in Massachusetts reported making zero or negative profits in 1997.



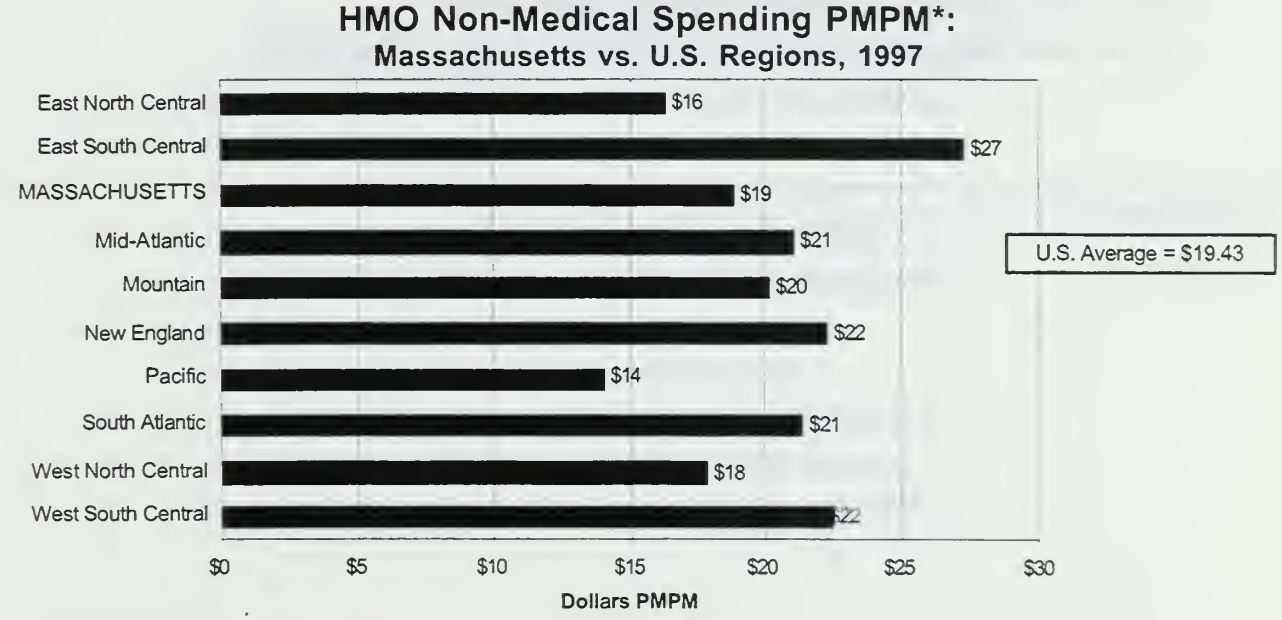
*Adjusted for regional wage differences.
Source: 1997 HMO Intercompany Rate Survey (Milliman and Robertson)

Figure 2.1



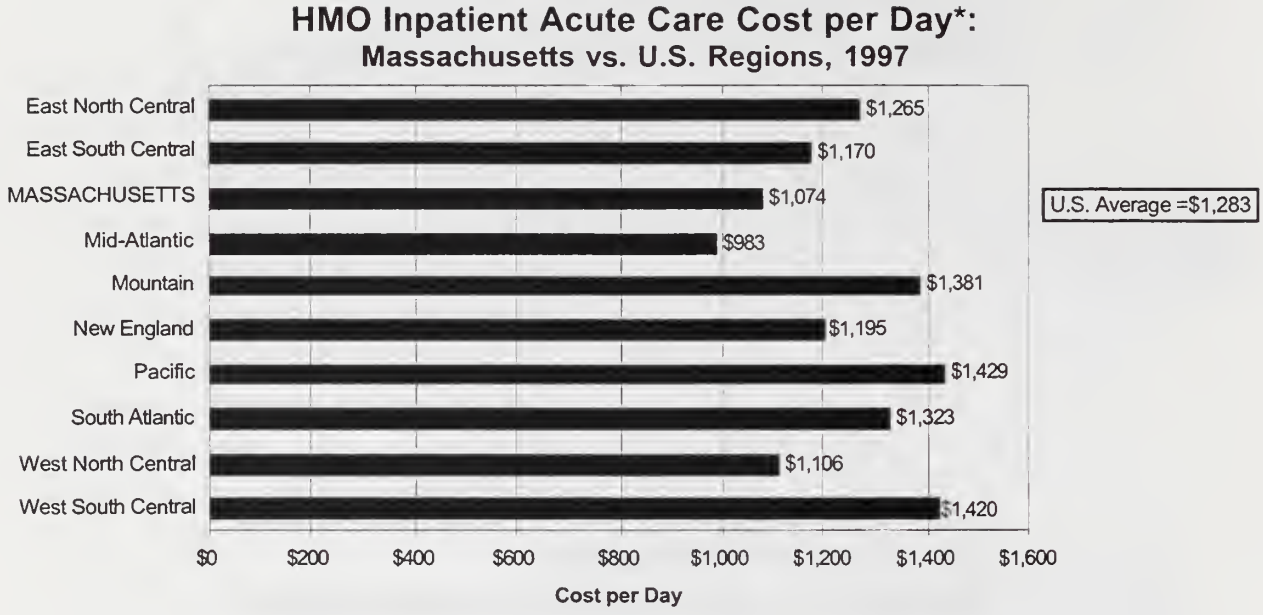
*Adjusted for regional wage differences.
Source: 1997 HMO Intercompany Rate Survey (Milliman and Robertson)

Figure 2.2



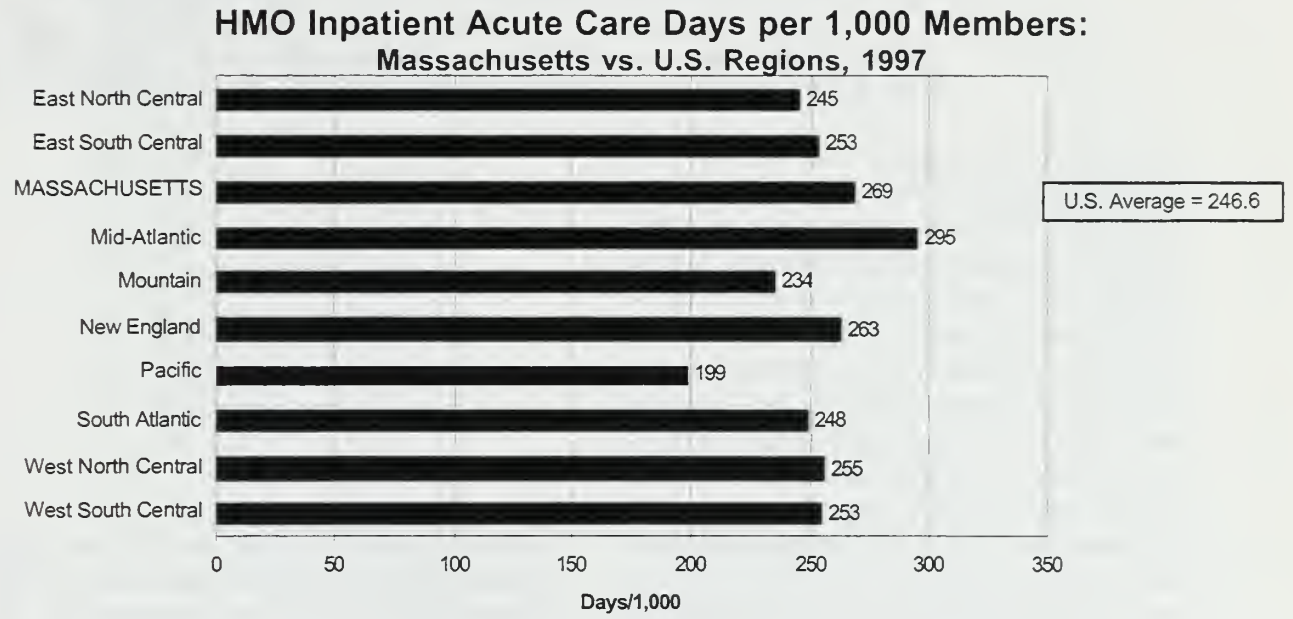
*Adjusted for regional wage differences.
Source: 1997 HMO Intercompany Rate Survey (Milliman and Robertson)

Figure 2.3



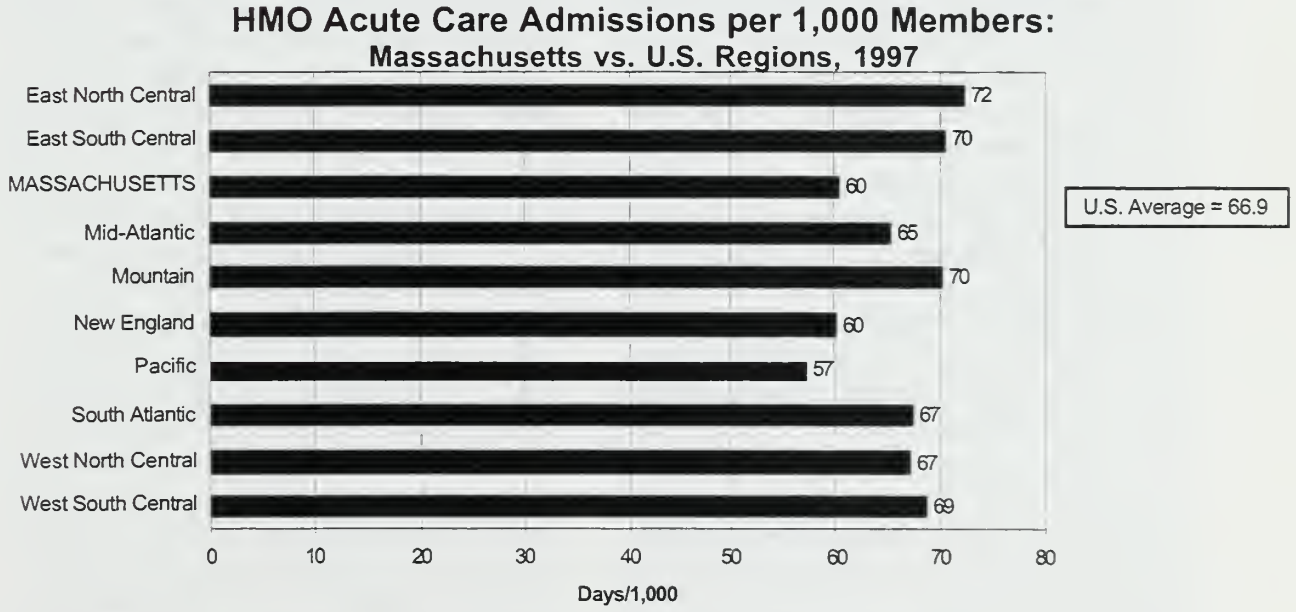
*Adjusted for regional wage differences.
Source: 1997 HMO Intercompany Rate Survey (Milliman and Robertson)

Figure 2.4



Source: 1997 HMO Intercompany Rate Survey (Milliman and Robertson)

Figure 2.5



Source: 1997 HMO Intercompany Rate Survey (Milliman and Robertson)

Figure 2.6

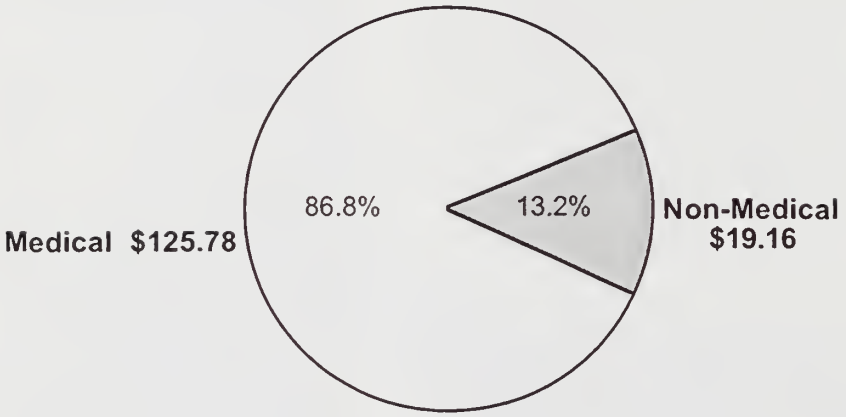
Chapter 3: Allocation of HMO Premium Dollars

The purpose of this chapter is to give purchasers a perspective on the relative contribution to total spending of each of the components analyzed throughout the report. The majority of HMO spending goes toward the direct purchase of medical services. In 1997 medical services consumed over 85% of total HMO expenditures, while non-medical spending accounted for only 13% (see Figure 3.1 on page 12). Out of an average total spending amount of $145 PMPM, approximately $125 was spent on medical services and $19 on non-medical services. (Differences in the total spending figures presented here and in Chapter 2 stem from the fact that the Milliman and Robertson survey is based on rate estimates for a hypothetical standard benefits package, while this report analyzes actual expenditures.)

In 1997, the largest components of total spending were professional at 32.8%, outpatient facility at 23.3%, inpatient facility at 20.7% and administration at 12.6% (see Figure 3.2 on page 12). Pharmacy spending accounted for another 10.3%. Surplus represented only 0.2% of total spending and 'other' non-medical spending consumed less than one-tenth of one percent. The remaining figures in this section illustrate the breakdowns within each of the major subcategories. Figure 3.3 on page 13 and Figure 3.5 on page 14 show that the chief component of inpatient facility and professional spending is the medical/surgical category. In 1997, medical/surgical spending consumed 69% of inpatient facility expenses and 87% of professional expenditures. Less significant components of inpatient and professional spending are maternity and sick newborns at 18% and mental health and chemical dependency at 6%. Figure 3.4 on page 14 shows that outpatient spending is more evenly divided across a range of services: emergency room at 9.9%, laboratory at 15.2%, ambulatory surgery at 18.6% and radiology at 28.5%. Finally, Figure 3.6 on page 14 indicates a fairly even distribution of administrative expenses across various areas of spending.

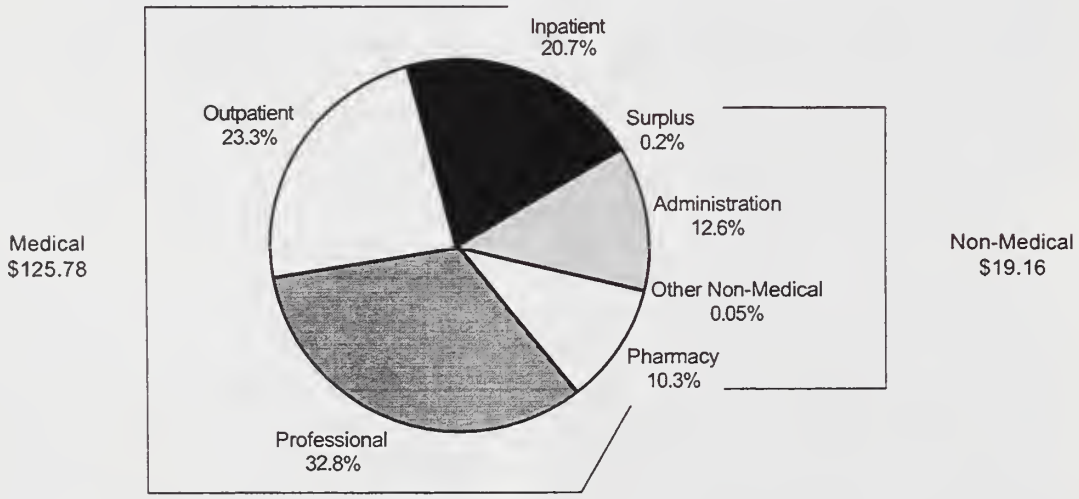
These findings provide a number of potentially important lessons for understanding variations in HMO spending. First, the results reveal that the most significant component of HMO spending is professional fees. Average spending for professional services in 1997 was $47.36 PMPM. The nature of the HMO-physician contract, including the range of financial incentives used to influence doctor behavior and the procedures used to make decisions about specialist referrals, may explain an important part of any variation in total spending. Second, the data offer the somewhat surprising result that average outpatient facility spending PMPM ($33.65) was 13% higher than average inpatient facility spending ($29.85). This suggests that, despite the traditionally high unit costs of inpatient care, outpatient facility costs may play a greater role in explaining aggregate spending differences among HMOs. Finally, differences in pharmacy benefits and administrative efficiency are also potentially important sources of variation in total HMO spending and warrant careful scrutiny when negotiating with each HMO.

Average Spending PMPM:
Medical and Non-Medical, 1997



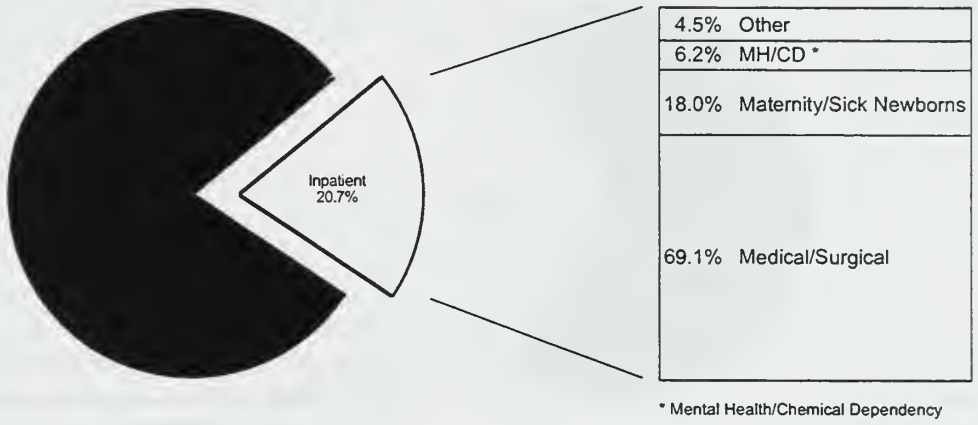
Average Total Spending PMPM = $144.94

Average Spending PMPM by Component, 1997



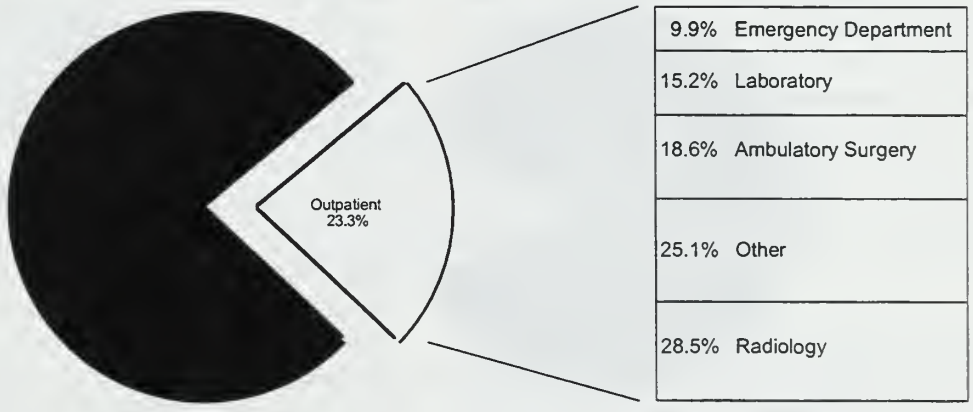
Average Total Spending PMPM = $144.94

Inpatient Spending PMPM, 1997
Average Percent of Spending



Total Inpatient Spending PMPM = $29.85

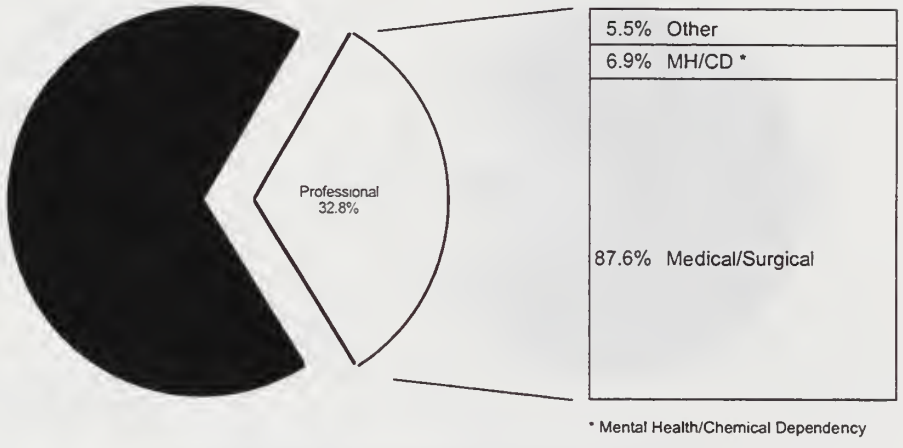
Outpatient Spending PMPM, 1997
Average Percent of Spending



Average Total Outpatient Spending PMPM = $33.65

Professional Spending PMPM, 1997

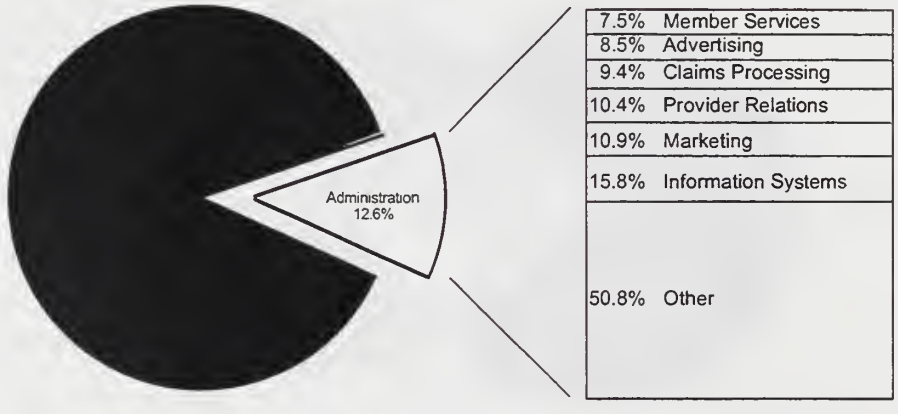
Average Percent of Spending



Average Total Professional Spending PMPM = $47.36

Administrative Spending PMPM, 1997

Average Percent of Spending*



Average Total Administrative Spending PMPM = $18.22

*percentages may not add up to 100% due to differing numbers of respondents in some categories

Chapter 4: Recent Changes in the Massachusetts HMO Sector

This section examines aggregate trends in the Massachusetts HMO sector by comparing changes in spending, unit cost and utilization between 1996 and 1997. According to the information summarized in Figure 4.1, average total spending per member per month across all participating HMOs with Massachusetts members rose 2.3% between 1996 and 1997. All of the increase in spending was attributable to higher medical expenses. Figure 4.1 also shows that HMO medical spending PMPM rose 3.1% in 1997, while HMO non-medical expenditures PMPM actually fell 3.2%. Higher medical spending among HMOs in Massachusetts could be due to a variety of factors, including medical inflation, higher negotiated facility and professional fees, increased utilization, a more severely ill member population, a shift in medical resource use toward more expensive types of care, or an expansion of member benefits.

Medical spending is divided into four main components: inpatient facility, outpatient facility, professional services, and pharmacy. (See Figure 4.2) Of these components, pharmacy spending rose the most at 6.4%, followed by professional spending at 5.5% and inpatient facility spending at 3.6%. Outpatient facility spending rose only 0.2% during the two year period under review. Given each component's share of overall medical spending, most of the growth in medical spending in 1997 can be attributed to the higher expenditures on inpatient services and professional fees. (Professional fees include both inpatient and outpatient physician-related expenses.) These results suggest a number of possibilities: hospitals were able to negotiate higher prices with HMOs, physician groups were able to negotiate higher fees, the utilization of inpatient services increased, or hospitals had higher operating costs. The findings could also mean that traditional restrictions on the use of specialist and/or inpatient services were relaxed.

Non-medical spending consists of three main components: administration, surplus and 'other.' (See Figure 4.3) Administrative expenses include expenditures relating to member services, advertising, claims processing, provider relations, marketing, and information systems. The 'other' category includes spending on reinsurance, provisions for taxes, and, in at least one case, interest income credit. According to Figure 4.3, administrative expenses per member per month fell 2%, surplus PMPM dropped 70%, and other non-medical costs PMPM rose 130% in 1997. However, spending for most non-medical categories on a per member month basis (with the exception of administrative expenses) is very low. As a result, changes in spending for these non-medical categories over a one-year period are not very helpful for explaining differences in total HMO spending.

To better understand the changes in HMO spending over the past year, we again look at what has happened with respect to unit costs and service utilization between 1996 and 1997. Three categories of facility costs (measured on a per day basis) and utilization (measured in terms of 1,000 members) were examined: inpatient acute, inpa-

tient non-acute and outpatient. Of these three types of services, both inpatient non-acute and outpatient facility costs per day fell in 1997 by a rate of 9.7% and 5.8%, respectively. (Outpatient costs per day include only ambulatory surgery and emergency department facility expenses.) In contrast, inpatient acute facility costs per day rose 1.2% between 1996 and 1997. The utilization of services, on the other hand, rose for all three types of care. Inpatient acute days per 1,000 members rose 0.7%, non-acute days per 1,000 members increased a dramatic 26.4%, and outpatient visits per 1,000 members rose 5.3%.

The inpatient category of medical spending presented in Figure 4.2 includes both acute and non-acute facility costs. However, because the utilization of non-acute services is low relative to acute services, most of the increase in inpatient facility spending is attributable to the acute care component of the category. Given this, the findings reported above suggest that the 1997 increase in average medical spending across all participating HMOs has slightly more to do with higher unit costs than with higher rates of utilization. This result suggests that Massachusetts' hospitals might have gained some advantage in HMO contract negotiations in recent years. Higher unit costs may also stem from increases in hospital costs relating to such factors as improvements in technology. In contrast, the results suggest that the slight increase in outpatient spending evidenced in Figure 4.2 was driven by higher rates of utilization, not by increases in facility costs or contracted prices. The apparent gains made by acute care facilities in negotiating higher prices with HMOs do not appear to have been realized by the state's non-acute care facilities.

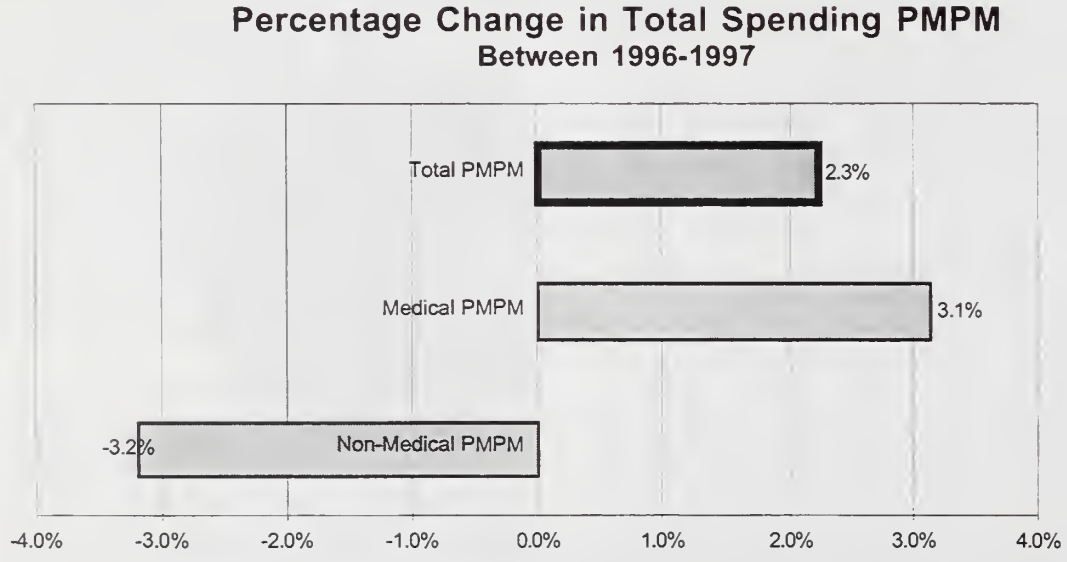


Figure 4.1

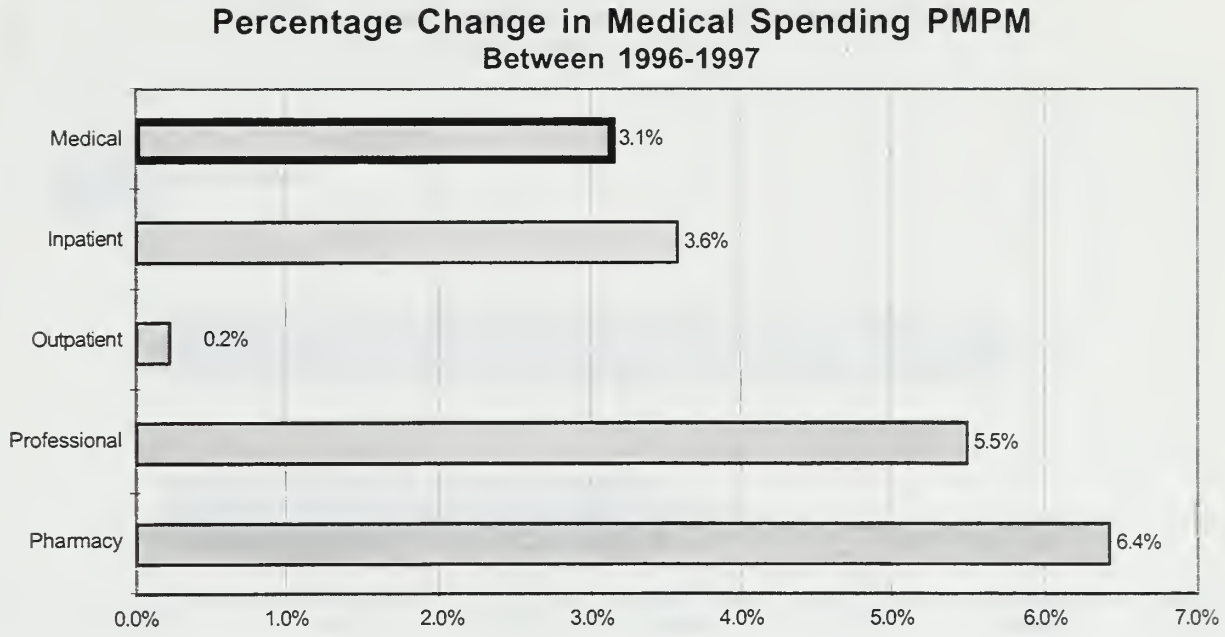


Figure 4.2

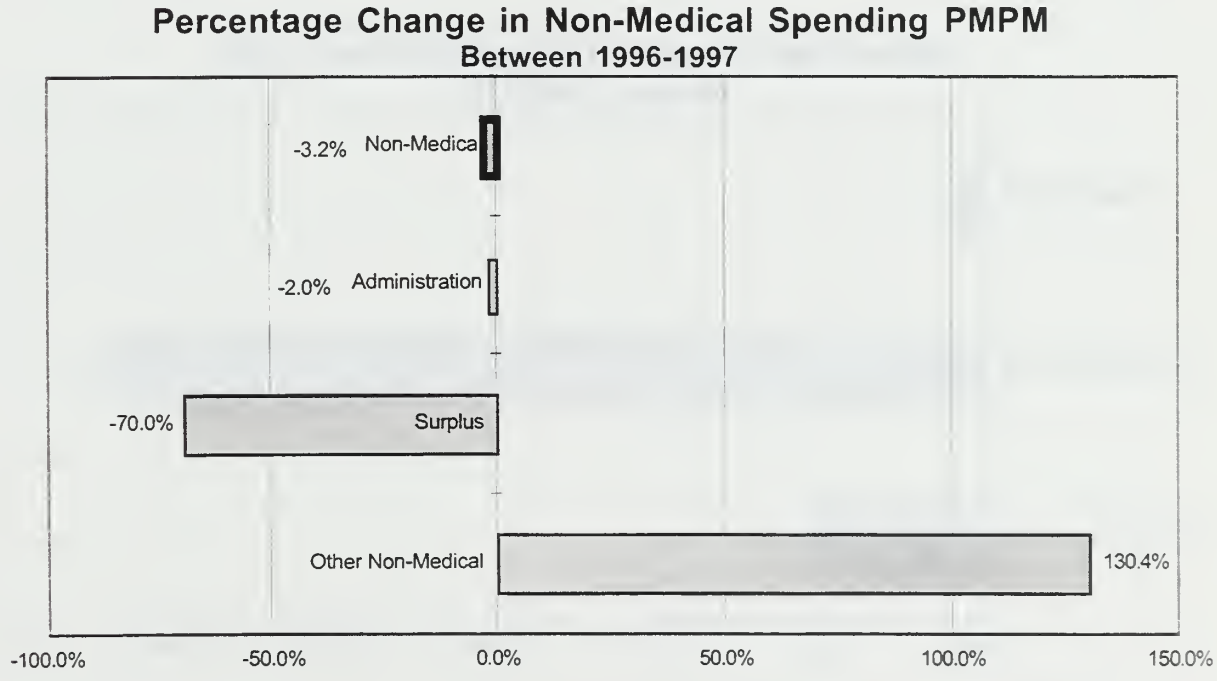


Figure 4.3

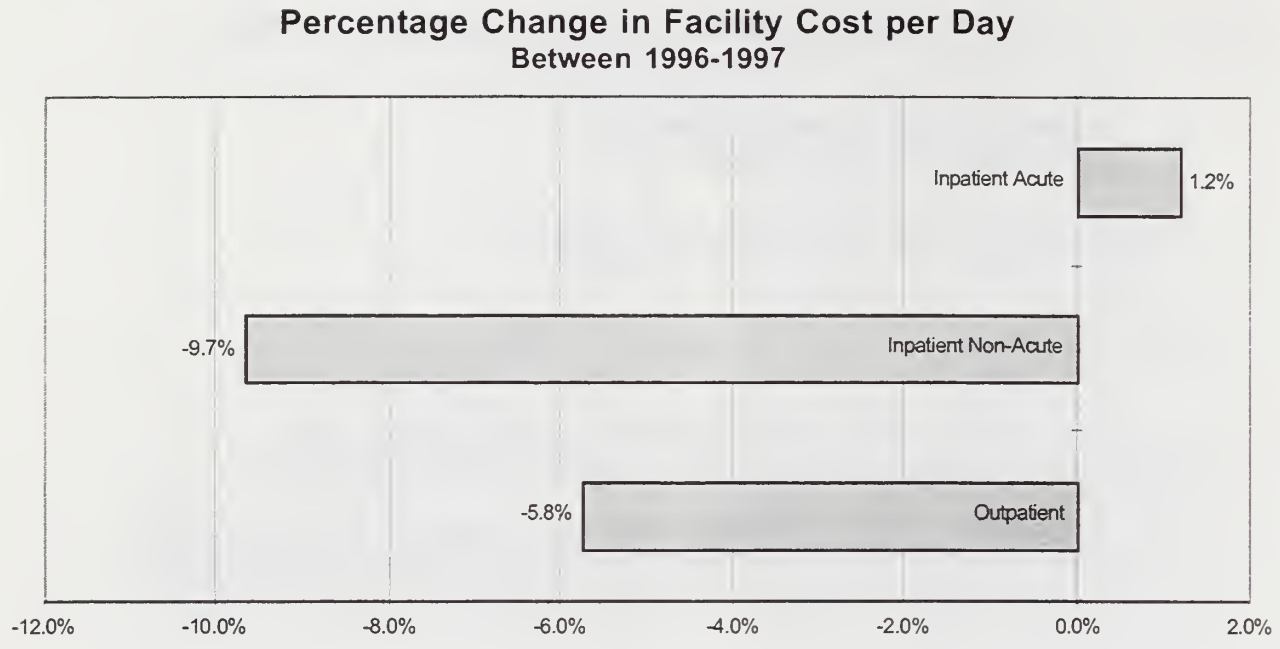


Figure 4.4

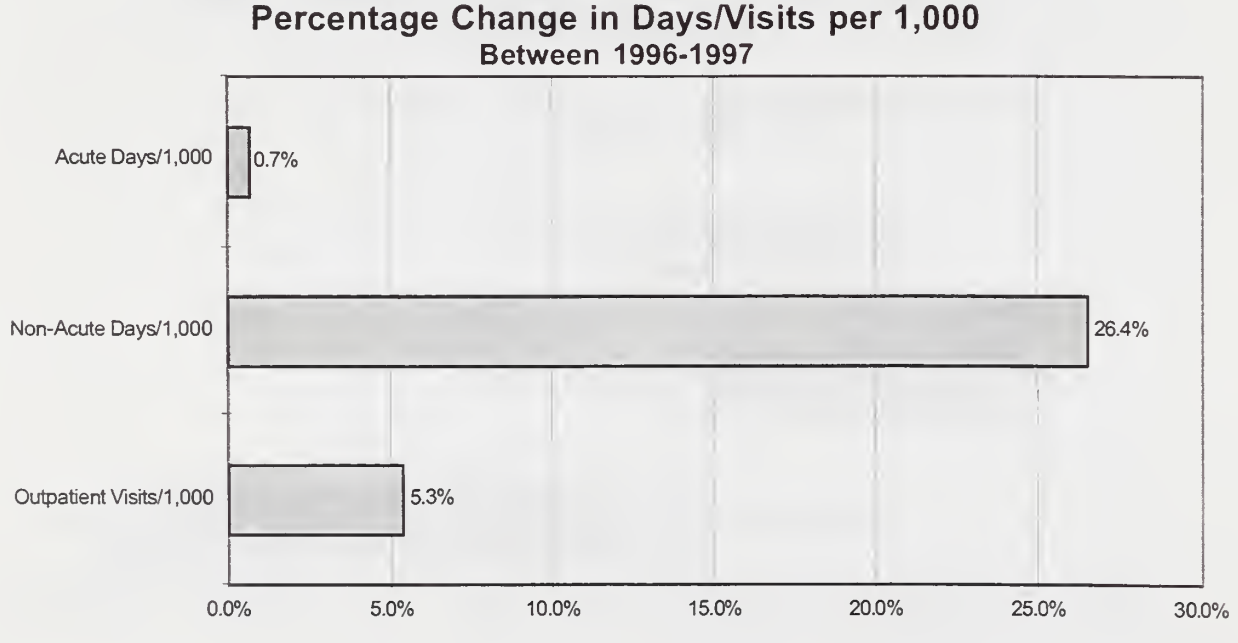


Figure 4.5

Chapter 5: 1997 HMO Rate Analysis

The main findings of the report are presented in this section. This chapter is divided into three parts. The first part looks at reported spending. The second two sections examine unit costs and service utilization. To allow purchasers to make comparisons among plans, HMOs are plotted alphabetically for each spending category. In cases where HMOs failed to provide information, the horizontal bar has been omitted. Zeros indicate that reported spending was in fact zero and not missing.

Rather than repeat the results for individual HMOs, the focus of this discussion is on the degree of variation among HMOs for each major spending category. The degree of variation is measured by the coefficient of variation (COV). A low COV indicates low variation. A high COV means high variation. (See Appendix A for a technical discussion of coefficient of variation.) A spending category with a low degree of variation indicates more uniform unit costs and utilization rates.

If spending, unit cost and utilization are similar across HMOs, there may be little room for rate negotiations in these areas. However, a spending category with a high degree of variation suggests that HMOs are either paying different prices or experiencing different rates of utilization. Purchasers may want to focus on areas with high degrees of variation in their rate negotiations with HMOs.

Report Findings

A great deal of the variation in total spending relates to non-medical expenditures. Non-medical spending varied from a low of approximately $10 per member per month (Fallon) to a high of $37 PMPM (NHP). Medical spending, on the other hand, ranged from a low of $114 PMPM (HS-MA and HS-NH) to a high of $138 (HPHC-Pilgrim). Given the wide degree of variation in non-medical spending, this is an area purchasers may want to discuss with HMOs. Of particular importance to purchasers' discussions with HMOs will be administrative expenses, the most significant component of non-medical spending. Administrative expenses ranged from a low of $10 PMPM (Fallon and HPHC-Harvard) to a high of $36 per member per month (NHP).

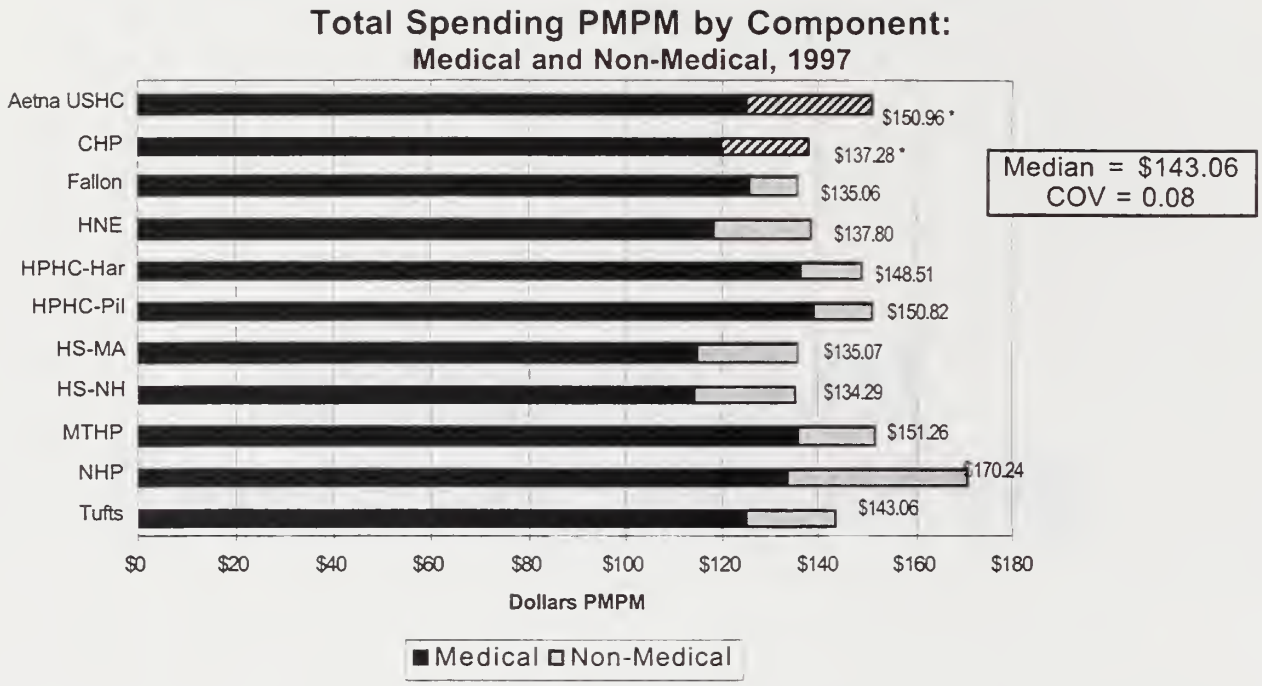
Within medical spending, the variation was fairly uniform across the major categories. The highest variation was for professional services, followed by outpatient facility, inpatient facility and pharmacy. Professional fees ranged from a low of $32 PMPM (HS-NH) to a high of approximately $70 PMPM (HPHC-Harvard). Given the variability in professional fees, together with its large share of overall medical spending, purchasers may want to discuss physician reimbursement methods with HMOs. Inpatient spending varied from a low of $24 PMPM (HPHC-Harvard and HS-MA) to a high of $41 PMPM (NHP). Outpatient spending range from a low of approximately $22 PMPM (HNE) to a high of $40 PMPM (MTHP).

The variation in 1997 inpatient facility spending across HMOs seems to have more

to do with differences in rates of utilization than in unit cost. Total admissions per 1,000 members ranged from a low of 51 (CHP and HPHC-Harvard) to a high of roughly 87 (NHP). Total inpatient acute facility days per 1,000 members varied from a low of 196 (CHP) to a high of 381 (NHP). In contrast, inpatient acute facility cost per day ranged from a low of $1,108 (HS-NH) to a high of $1,516 (MTHP). Conversely, the variation in 1997 outpatient facility spending across HMOs appears to be related more to differences in unit cost than in utilization. Outpatient visits per 1,000 members ranged from 1,793 (Aetna USHC) to 7,975 (HPHC-Pilgrim). In contrast, outpatient facility cost per day ranged from $283 for Tufts to $1,207 (Fallon).

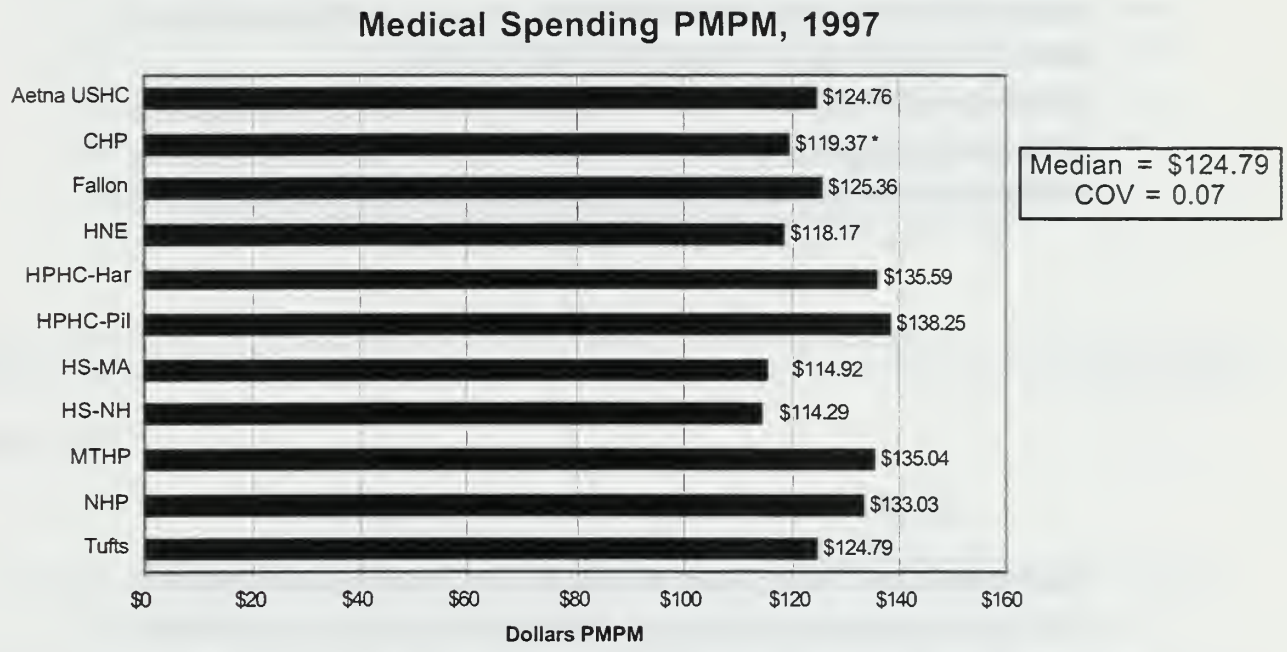
Finally, when pharmacy spending is calculated across only members who have prescription benefits, the variation across plans increased significantly. Pharmacy spending per member month with benefits varied from a low of $14.66 (HPHC-Harvard) to a high of $33.40 (Aetna USHC). The cost per prescription to the HMO (excluding co-payments) ranged from a low of $22.80 (Fallon) to a high of $32.23 (Aetna USHC). The number of prescriptions per member per year varied from a low of roughly 6.7 (MTHP and HS-NH) to a high of 12.4 (Aetna USHC).

HMO Spending per Member per Month



* Aetna USHC and CHP were not able to provide non-medical spending data. Their non-medical spending was estimated using 1995 proportions of total spending. Additionally, CHP was not able to provide pharmacy spending data. Their 1997 pharmacy spending was estimated by adjusting their 1995 spending by the average pharmacy spending increase from 1995-1997.

Figure 5.1



* CHP was not able to provide pharmacy spending data. Their 1997 pharmacy spending was estimated by adjusting their 1995 spending by the average pharmacy spending increase from 1995-1997.

Figure 5.2

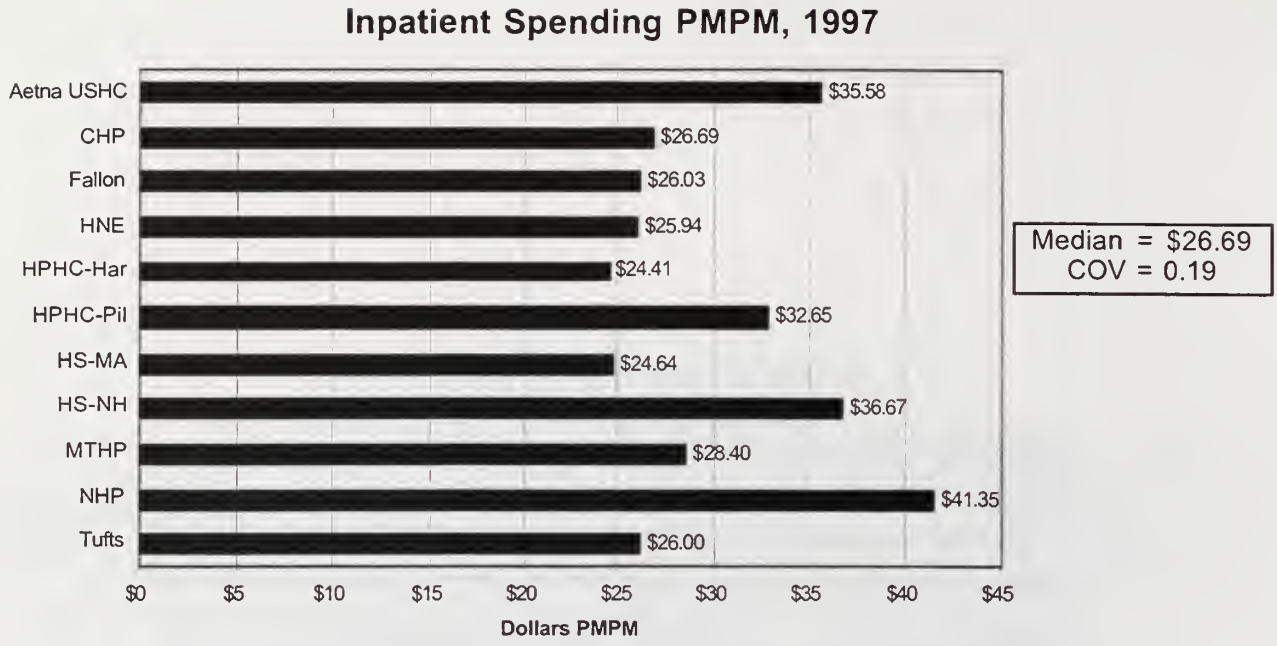
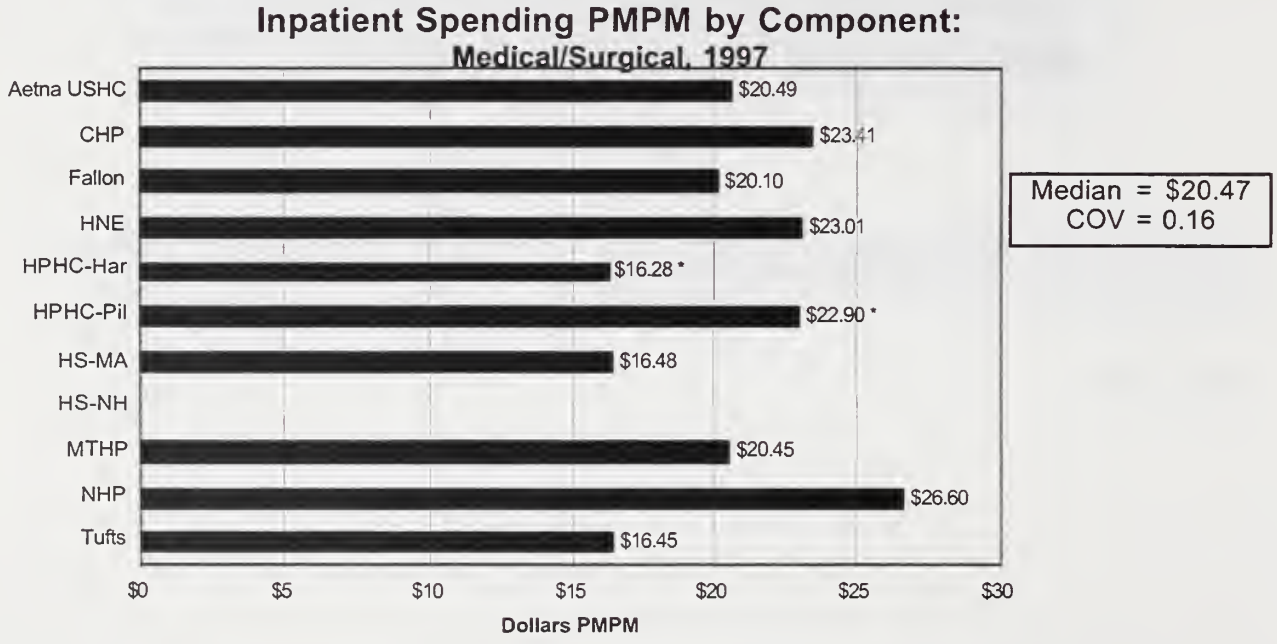
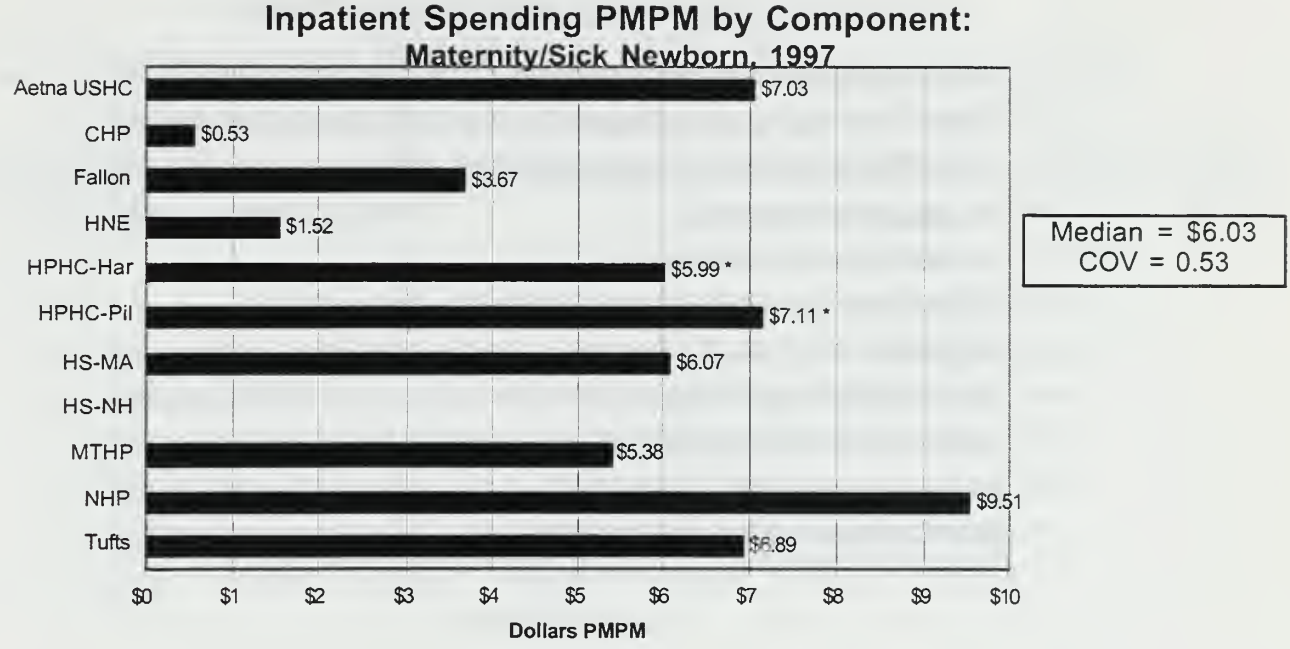


Figure 5.3



* HPHC - Harvard and Pilgrim included sick newborn spending in inpatient medical/surgical spending. Sick newborn spending was estimated using 1995 proportion of total inpatient spending and transfered to appropriate category.

Figure 5.4



* HPHC - Harvard and Pilgrim included sick newborn spending in inpatient medical/surgical spending. Sick newborn spending was estimated using 1995 proportion of total inpatient spending and transfered to appropriate category.

Figure 5.5

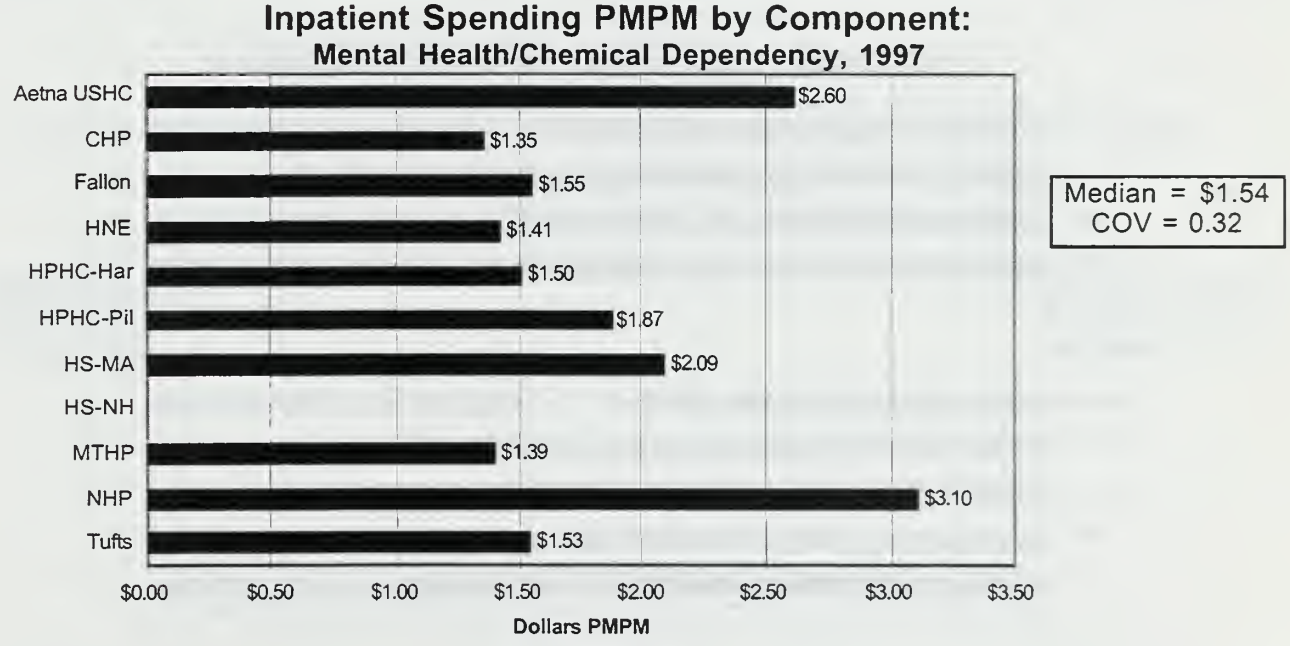


Figure 5.6

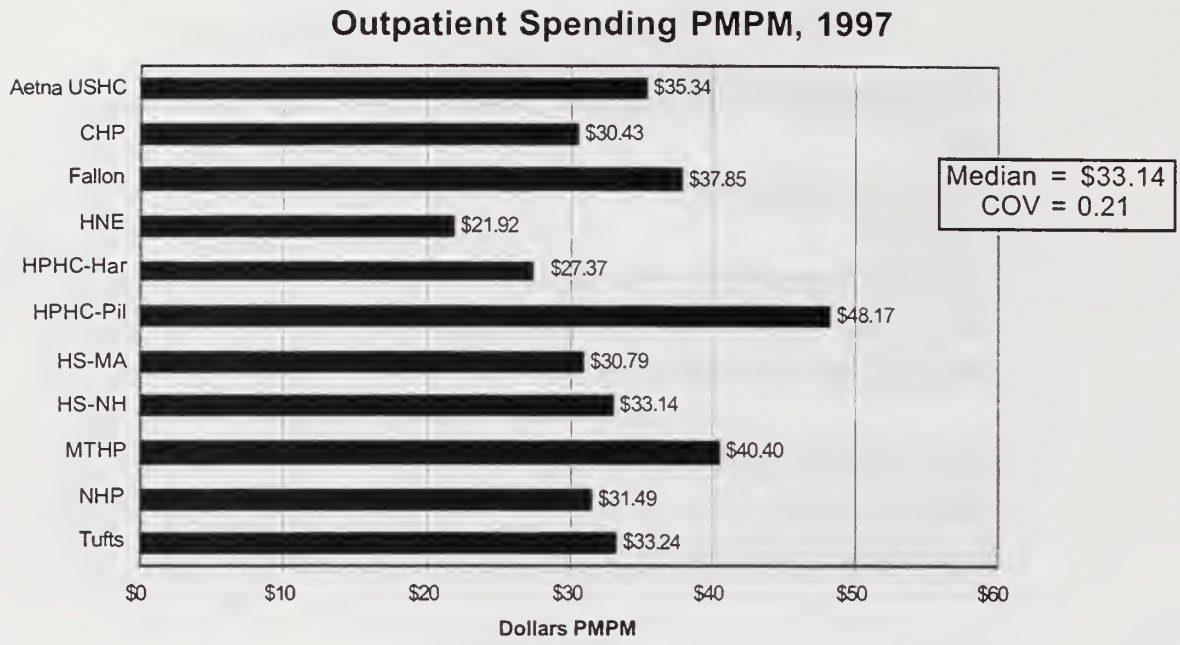


Figure 5.7

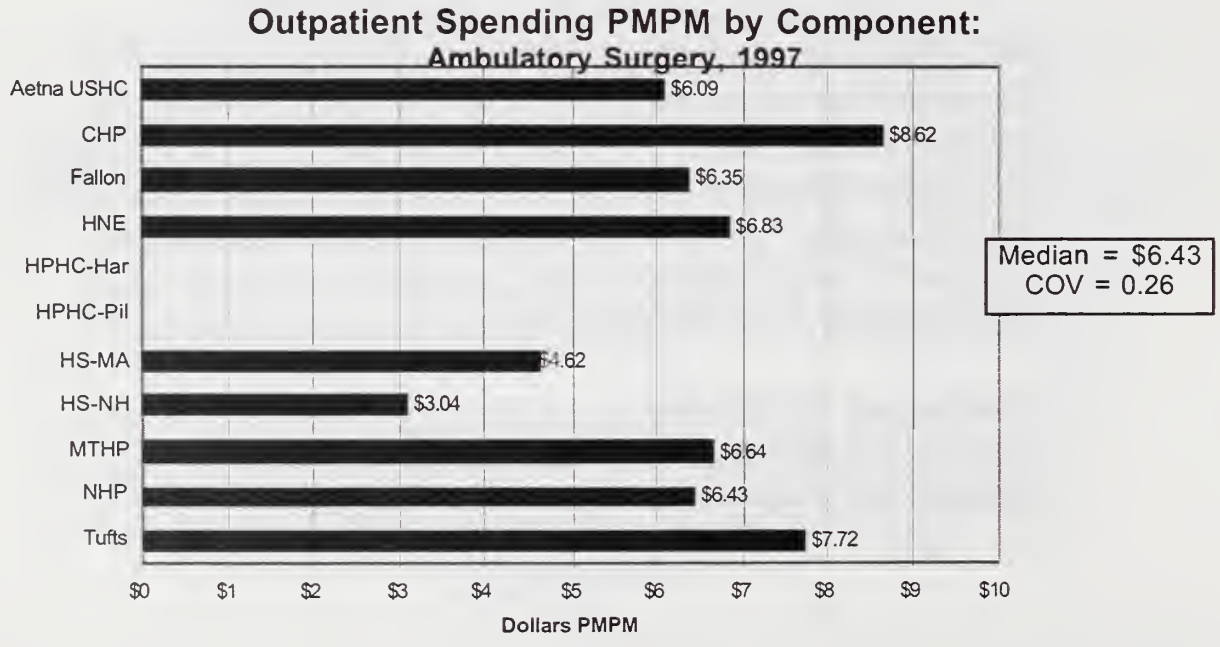


Figure 5.8

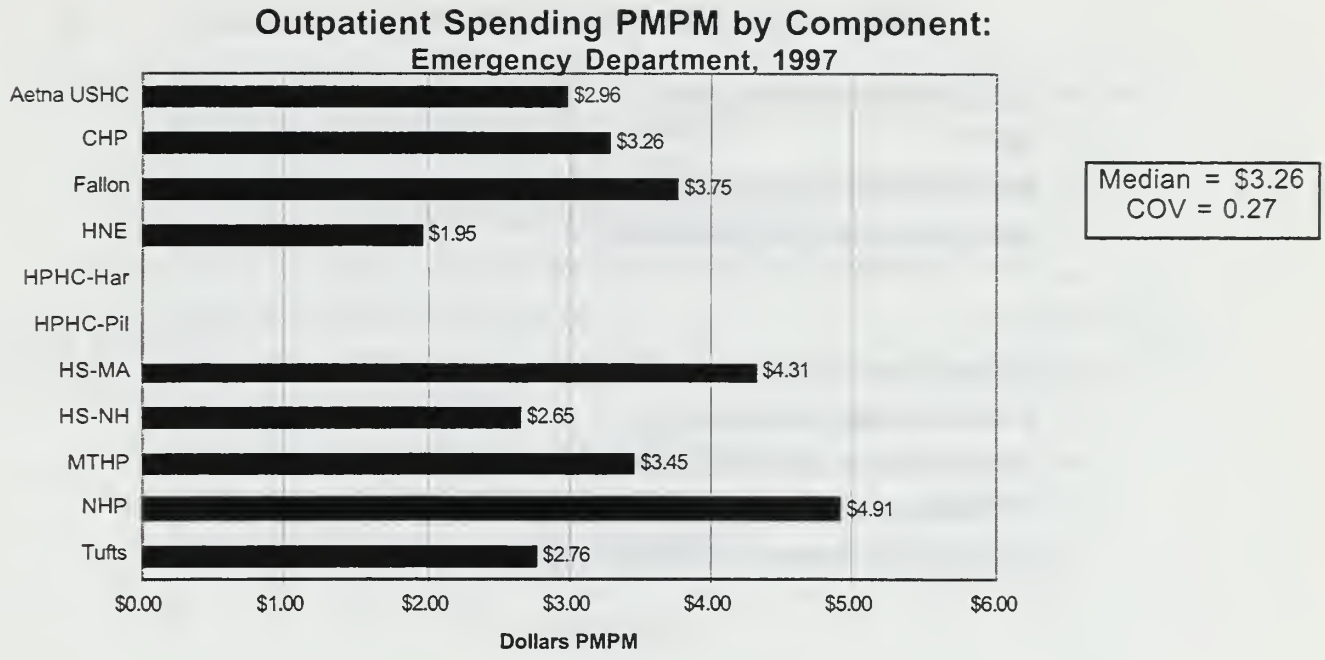


Figure 5.9

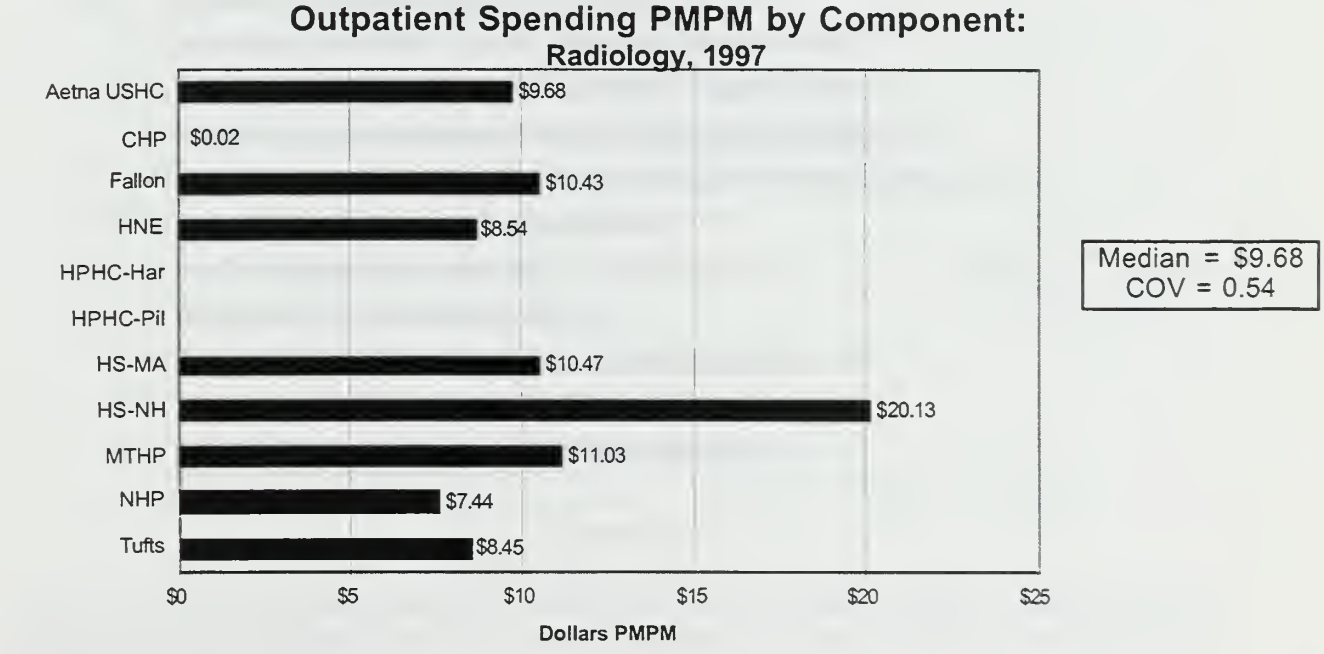


Figure 5.10

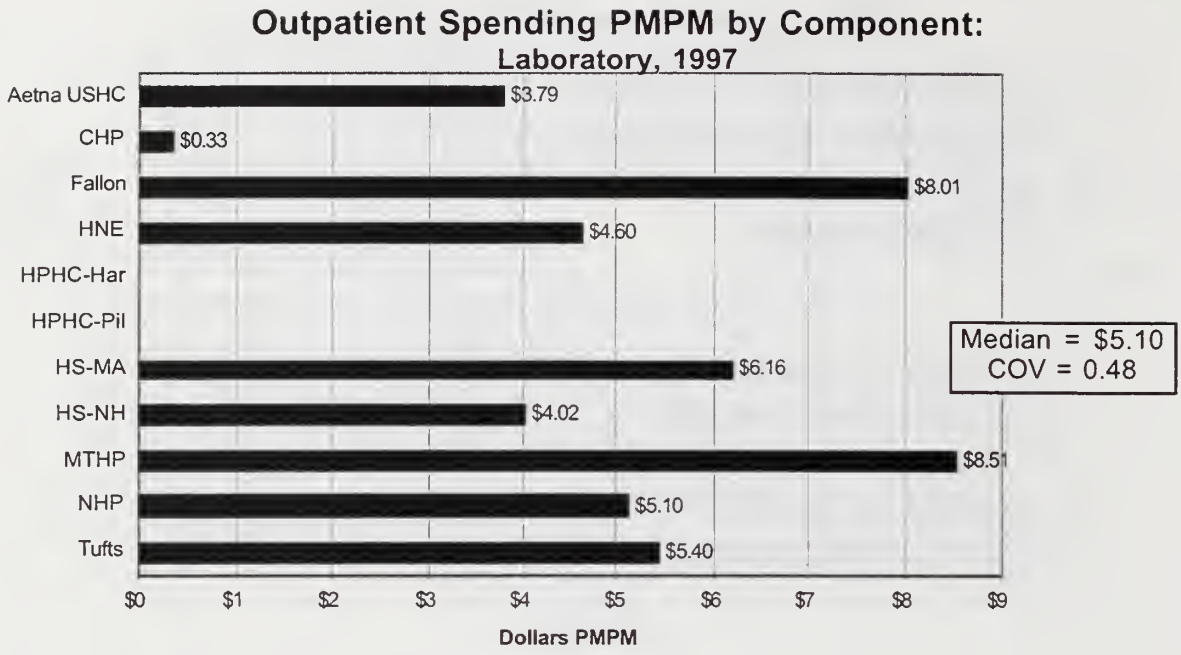
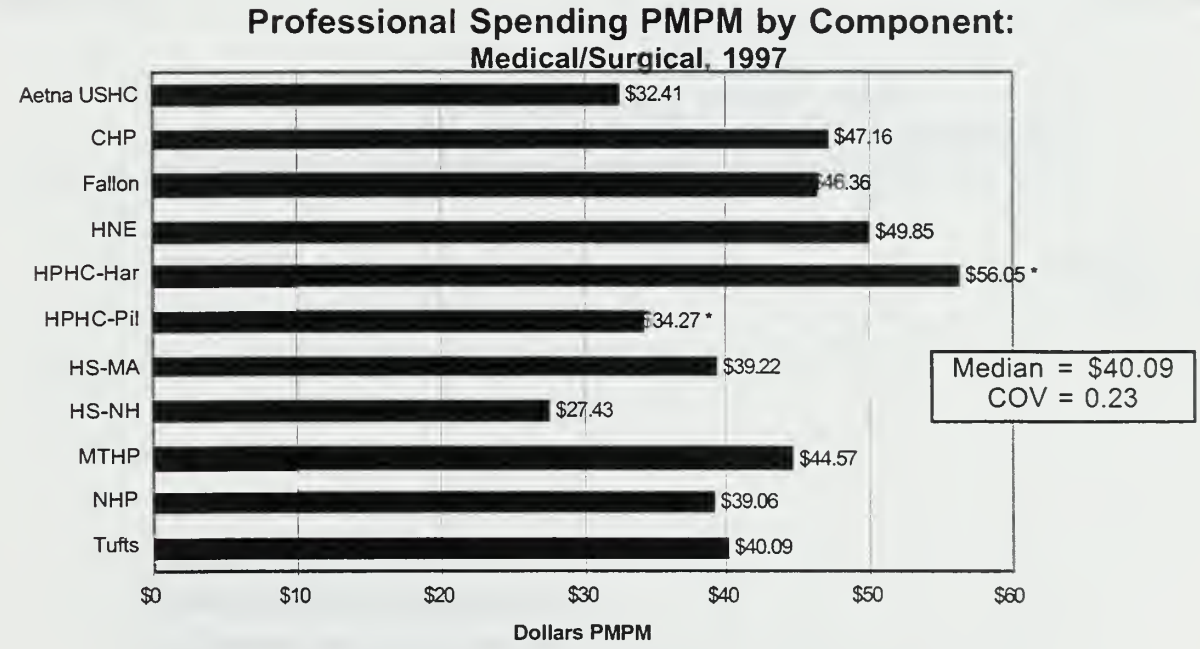

Outpatient Spending PMPM by Component:
Laboratory, 1997
Aetna USHC
CHP
Fallon
HNE
HPHC-Har
HPHC-Pil
HS-MA
HS-NH
MTHP
NHP
Tufts
$3.79
$0.33
$8.01
$4.60
$6.16
$4.02
$8.51
$5.10
$5.40
Median = $5.10
COV = 0.48
$0
$1
$2
$3
$4
$5
$6
$7
$8
$9
Dollars PMPM

Figure 5.11

Figure 5.12



* HPHC - Harvard and Pilgrim included other professional spending in medical/surgical spending. Other professional spending was estimated using 1995 proportion of total professional spending and transferred to the appropriate spending category.

Figure 5.13

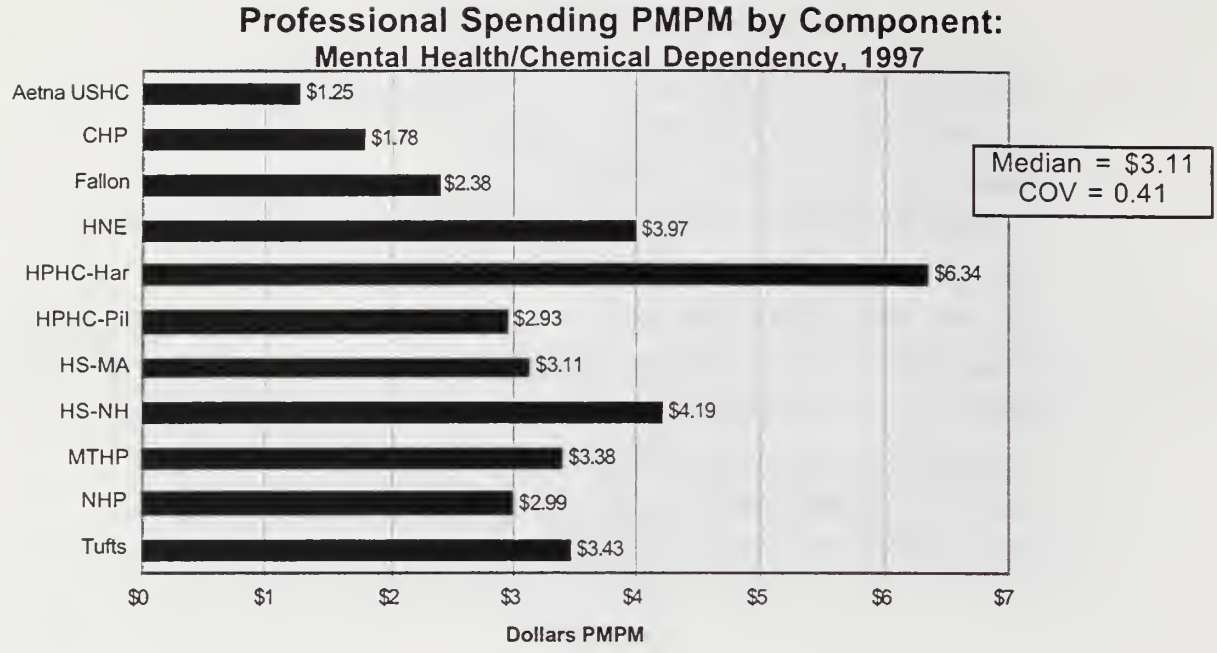
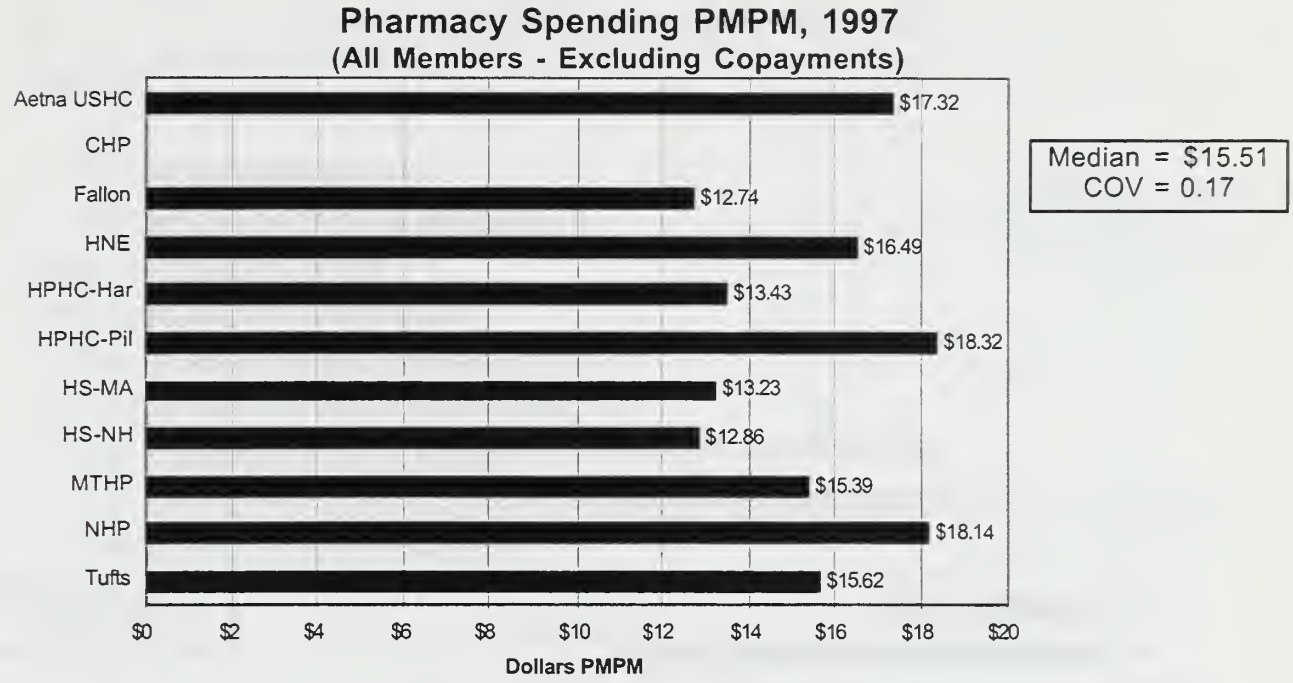
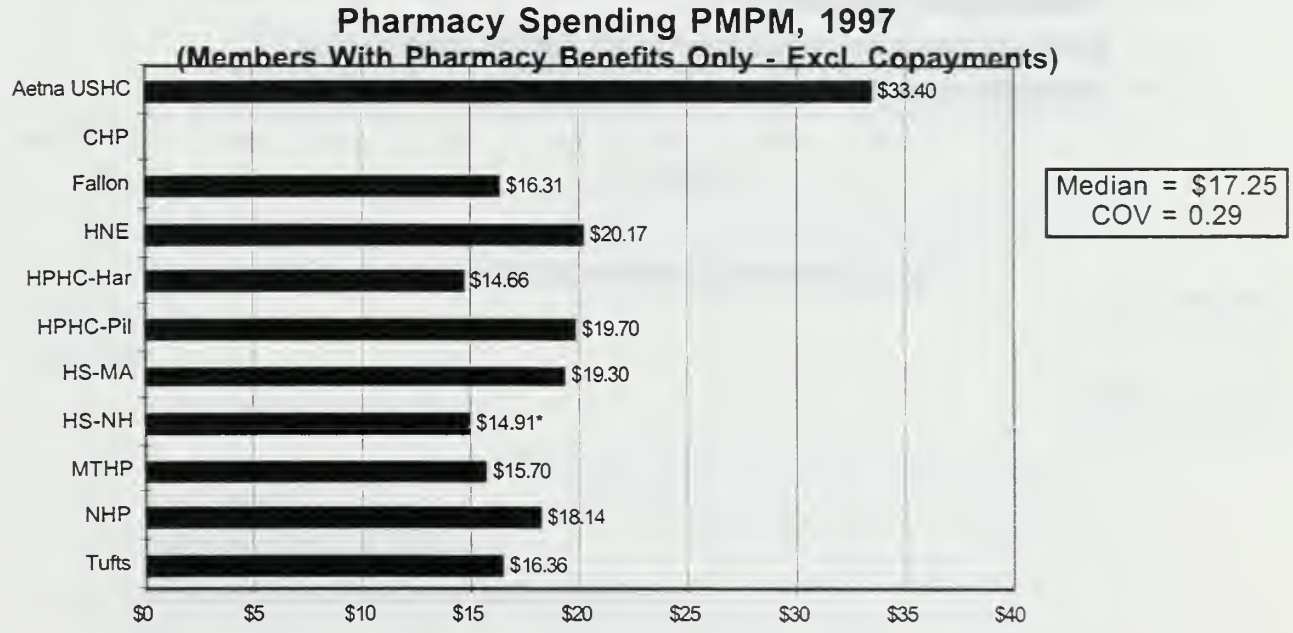

Professional Spending PMPM by Component:
Mental Health/Chemical Dependency, 1997
Aetna USHC
CHP
Fallon
HNE
HPHC-Har
HPHC-Pil
HS-MA
HS-NH
MTHP
NHP
Tufts
$1.25
$1.78
$2.38
$3.97
$6.34
$2.93
$3.11
$4.19
$3.38
$2.99
$3.43
Median = $3.11
COV = 0.41
$0
$1
$2
$3
$4
$5
$6
$7
Dollars PMPM

Figure 5.14



This graph represents total pharmacy spending divided by total member months. It represents the pharmacy component of total spending per member per month.

Figure 5.15



* HS - NH reflects 1996 levels.

This graph represents total pharmacy spending divided by member months with pharmacy benefits only. It represents the spending per member per month for members with a pharmacy benefit.

Figure 5.16

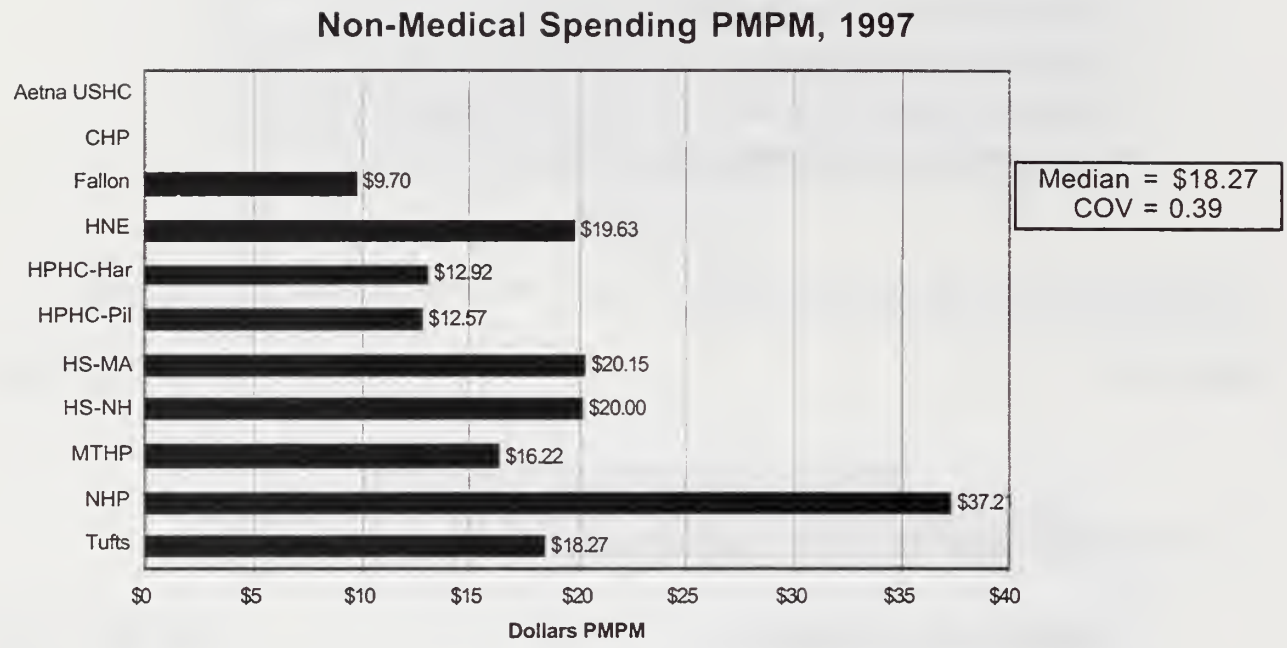

Non-Medical Spending PMPM, 1997
Aetna USHC
CHP
Fallon
HNE
HPHC-Har
HPHC-Pil
HS-MA
HS-NH
MTHP
NHP
Tufts
$9.70
$19.63
$12.92
$12.57
$20.15
$20.00
$16.22
$37.21
$18.27
$0
$5
$10
$15
$20
$25
$30
$35
$40
Dollars PMPM
Median = $18.27
COV = 0.39

Figure 5.17

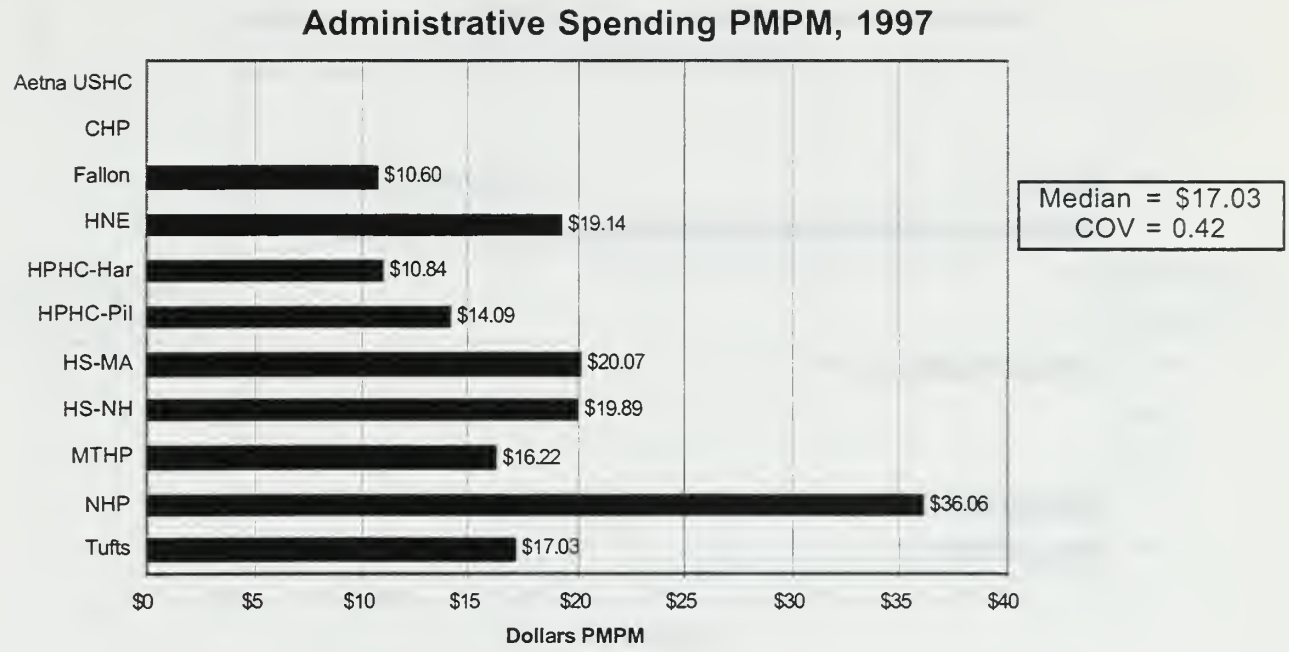


Figure 5.18

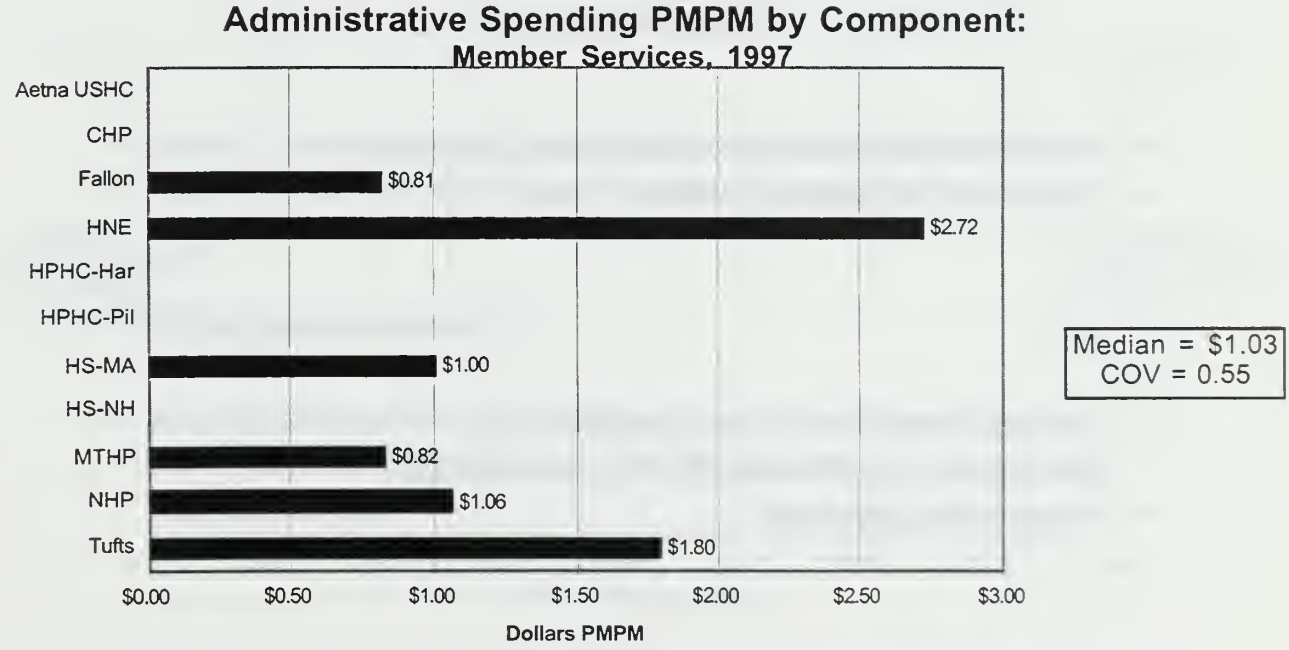


Figure 5.19

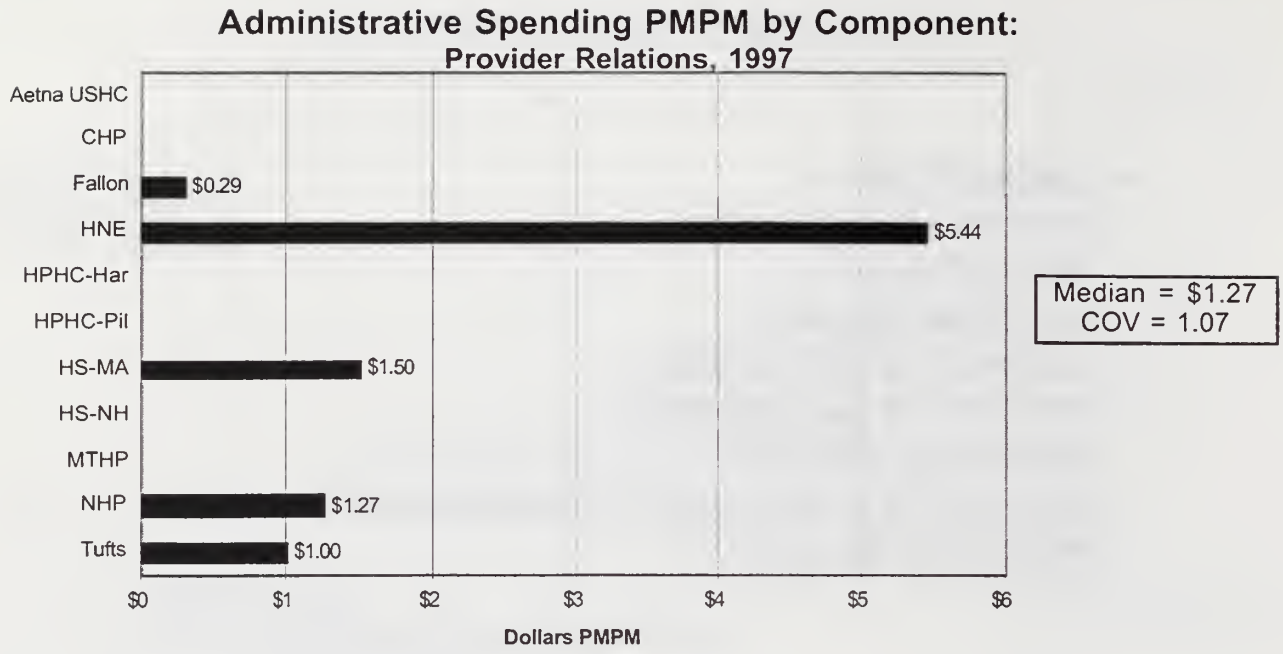


Figure 5.20

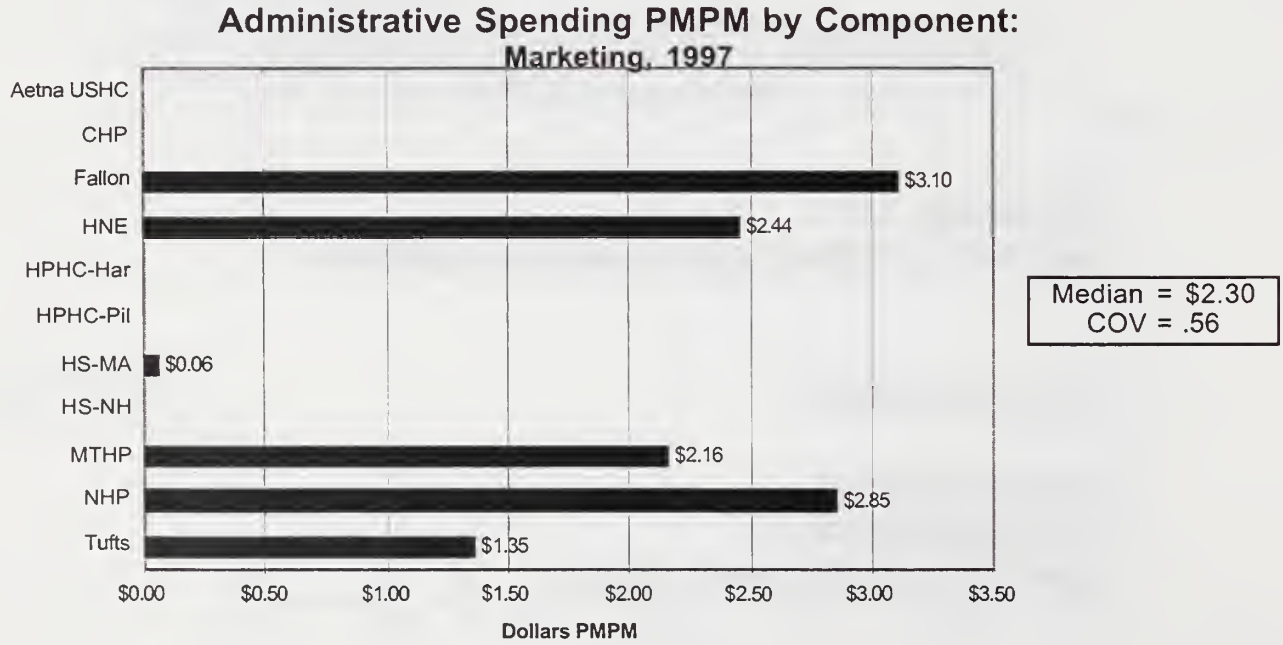


Figure 5.21

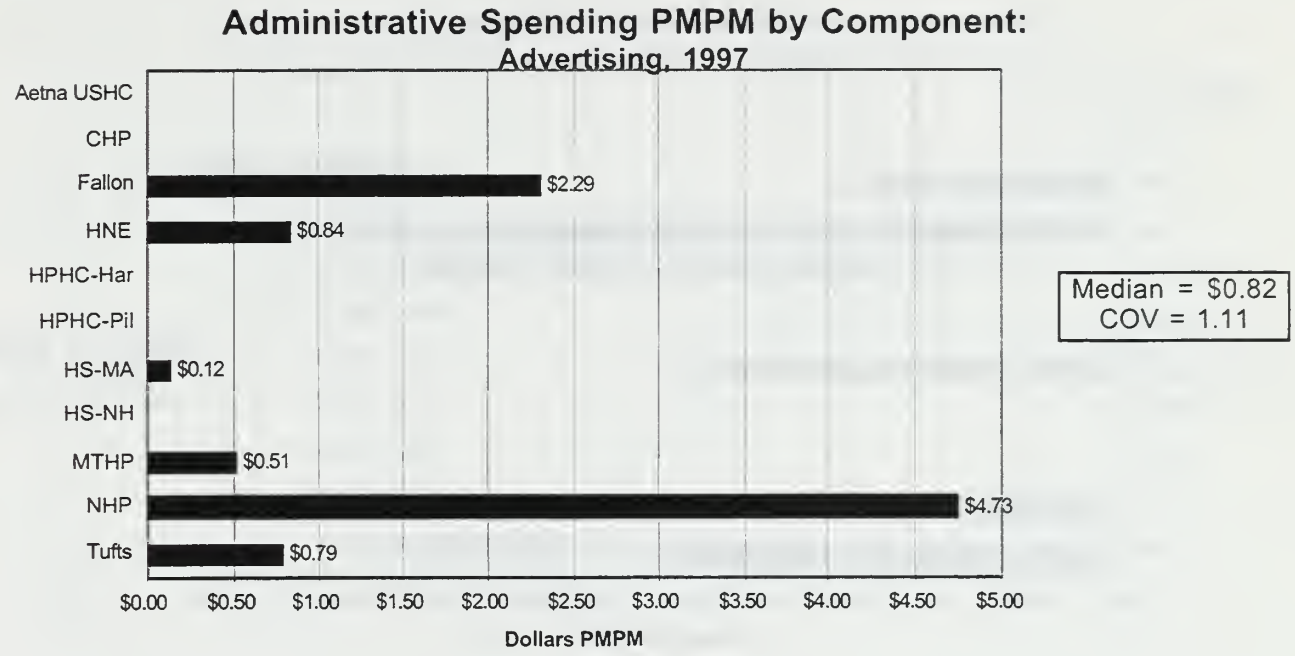


Figure 5.22

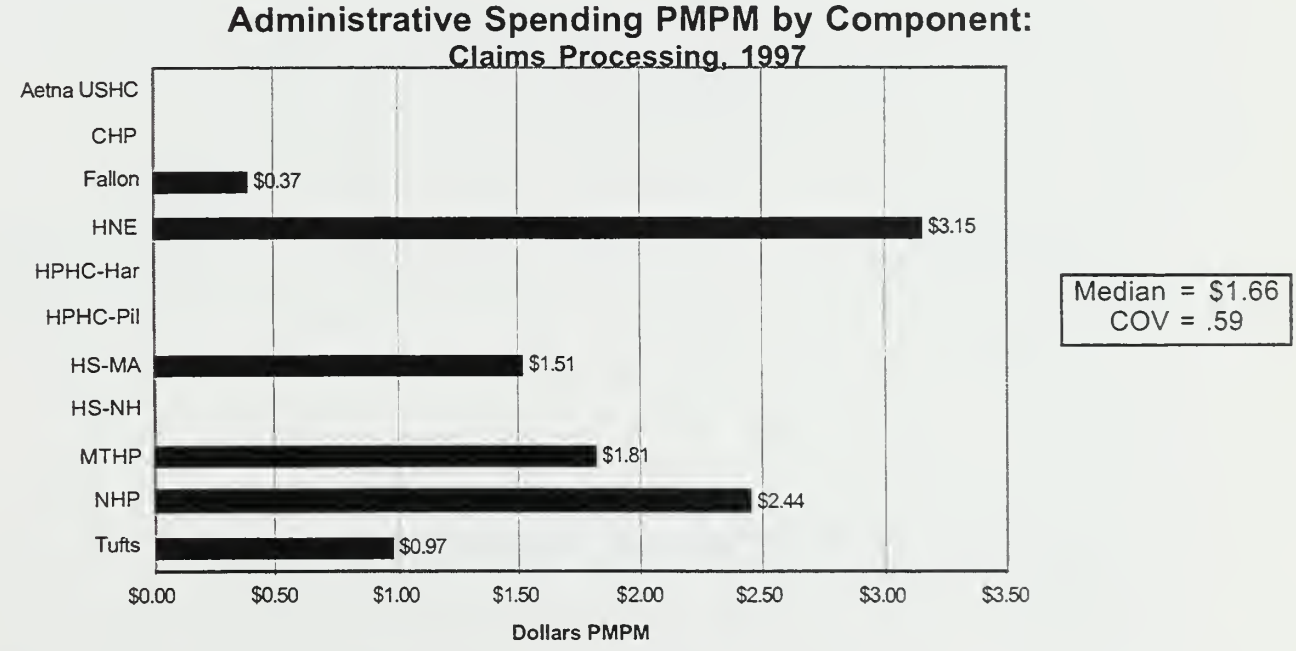


Figure 5.23

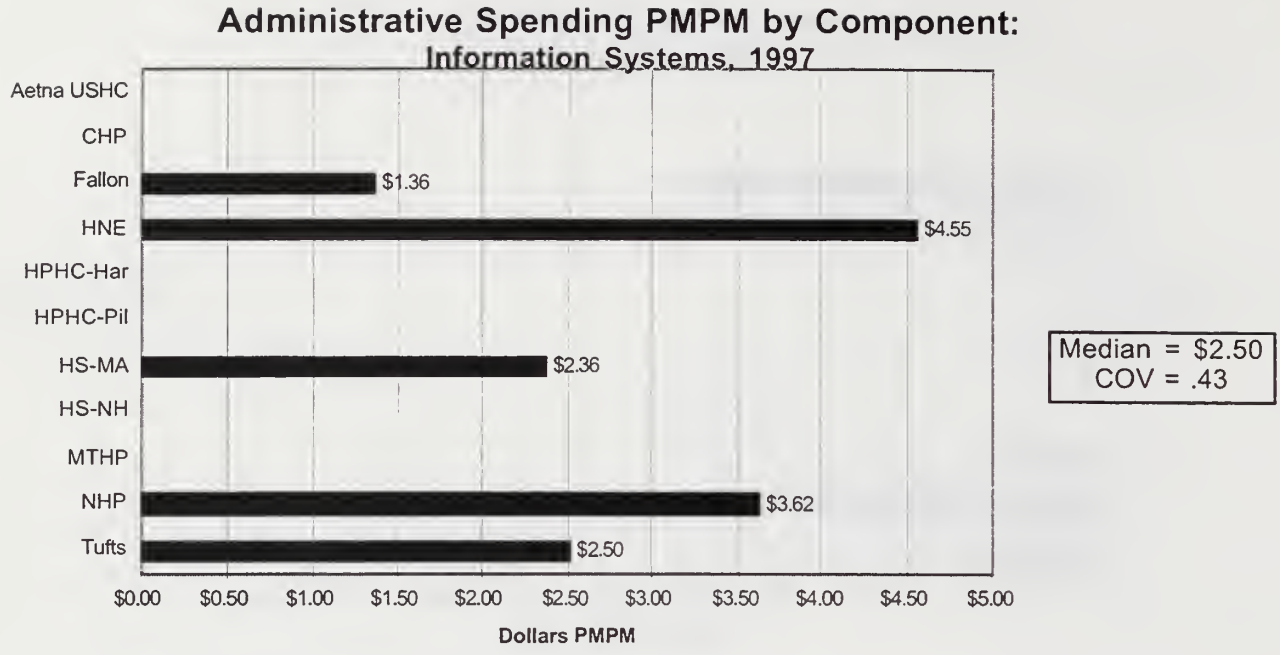

Administrative Spending PMPM by Component:
Information Systems, 1997
Aetna USHC
CHP
Fallon
HNE
HPHC-Har
HPHC-Pil
HS-MA
HS-NH
MTHP
NHP
Tufts
$1.36
$4.55
$2.36
$3.62
$2.50
$0.00
$0.50
$1.00
$1.50
$2.00
$2.50
$3.00
$3.50
$4.00
$4.50
$5.00
Dollars PMPM
Median = $2.50
COV = .43

Figure 5.24

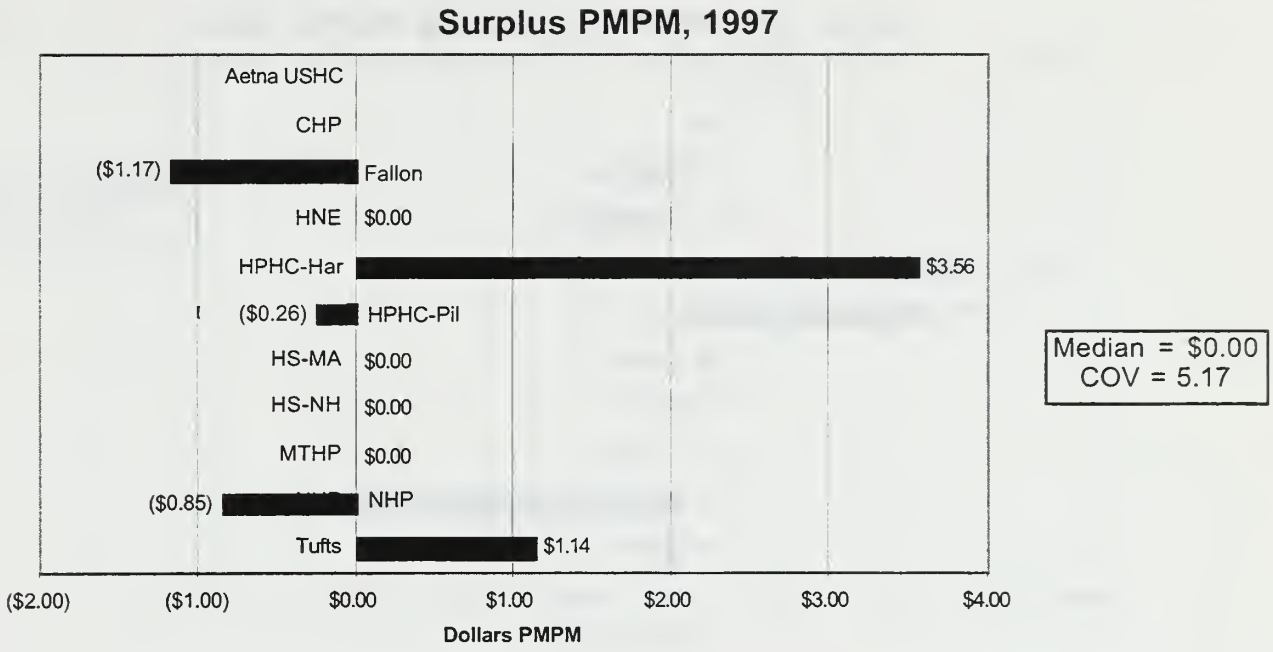
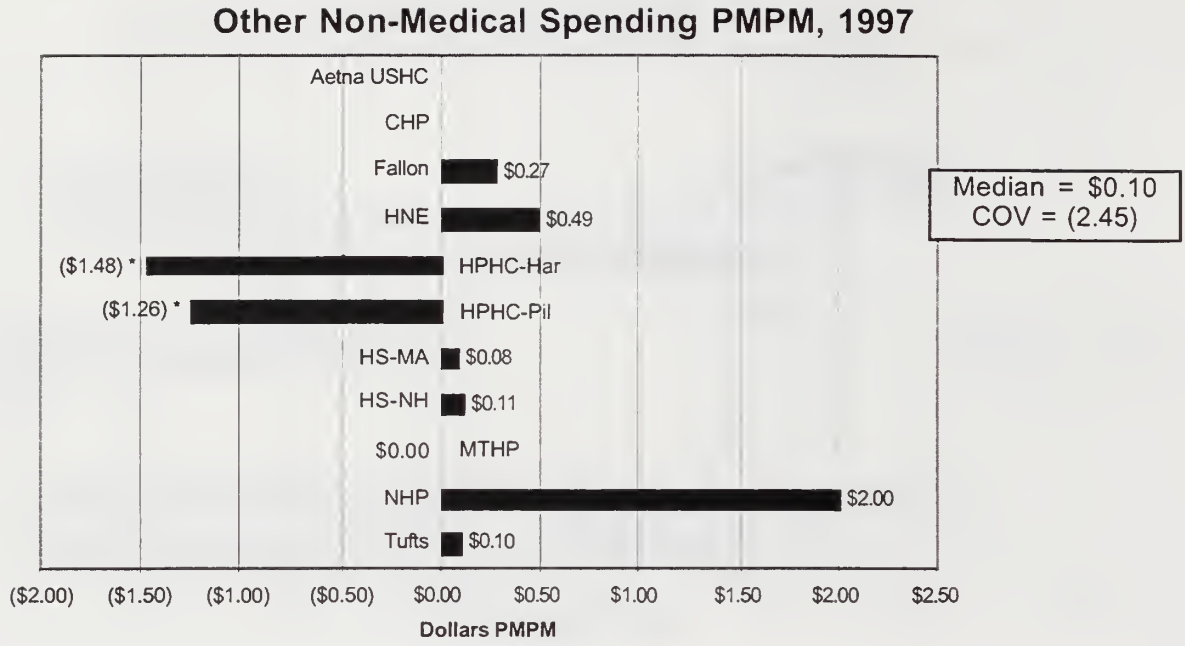

Surplus PMPM, 1997
Aetna USHC
CHP
($1.17)
Fallon
HNE
$0.00
HPHC-Har
$3.56
($0.26)
HPHC-Pil
HS-MA
$0.00
HS-NH
$0.00
MTHP
$0.00
($0.85)
NHP
Tufts
$1.14
($2.00)
($1.00)
$0.00
$1.00
$2.00
$3.00
$4.00
Dollars PMPM
Median = $0.00
COV = 5.17

Figure 5.25



* HPHC - Harvard and Pilgrim's negative spending values reflect interest income credit.

Figure 5.26

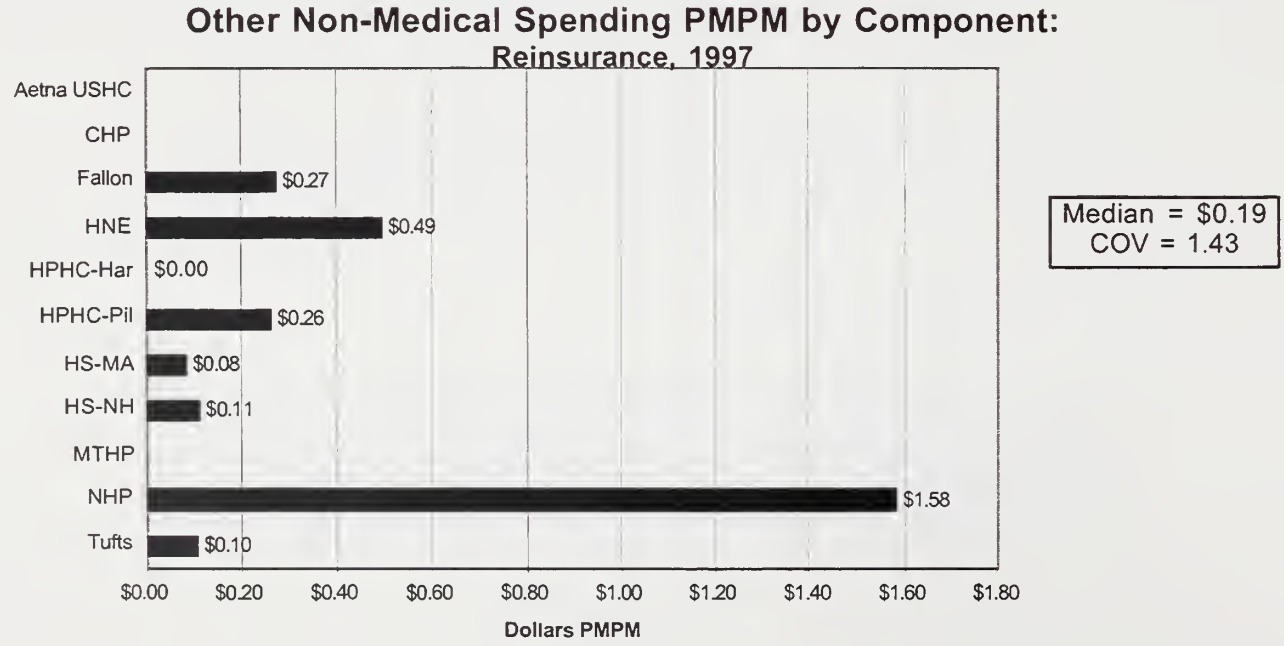


Figure 5.27

HMO Unit Costs

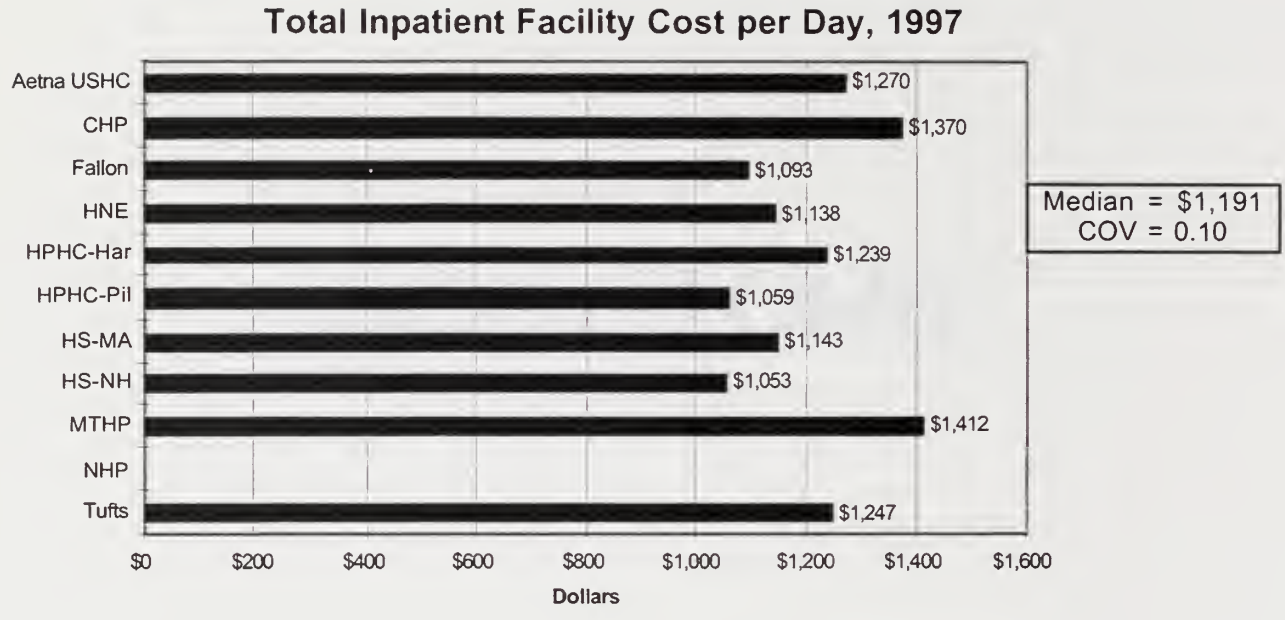

Total Inpatient Facility Cost per Day, 1997
Aetna USHC
CHP
Fallon
HNE
HPHC-Har
HPHC-Pil
HS-MA
HS-NH
MTHP
NHP
Tufts
$1,270
$1,370
$1,093
$1,138
$1,239
$1,059
$1,143
$1,053
$1,412
$1,247
Median = $1,191
COV = 0.10
$0
$200
$400
$600
$800
$1,000
$1,200
$1,400
$1,600
Dollars

Figure 5.28

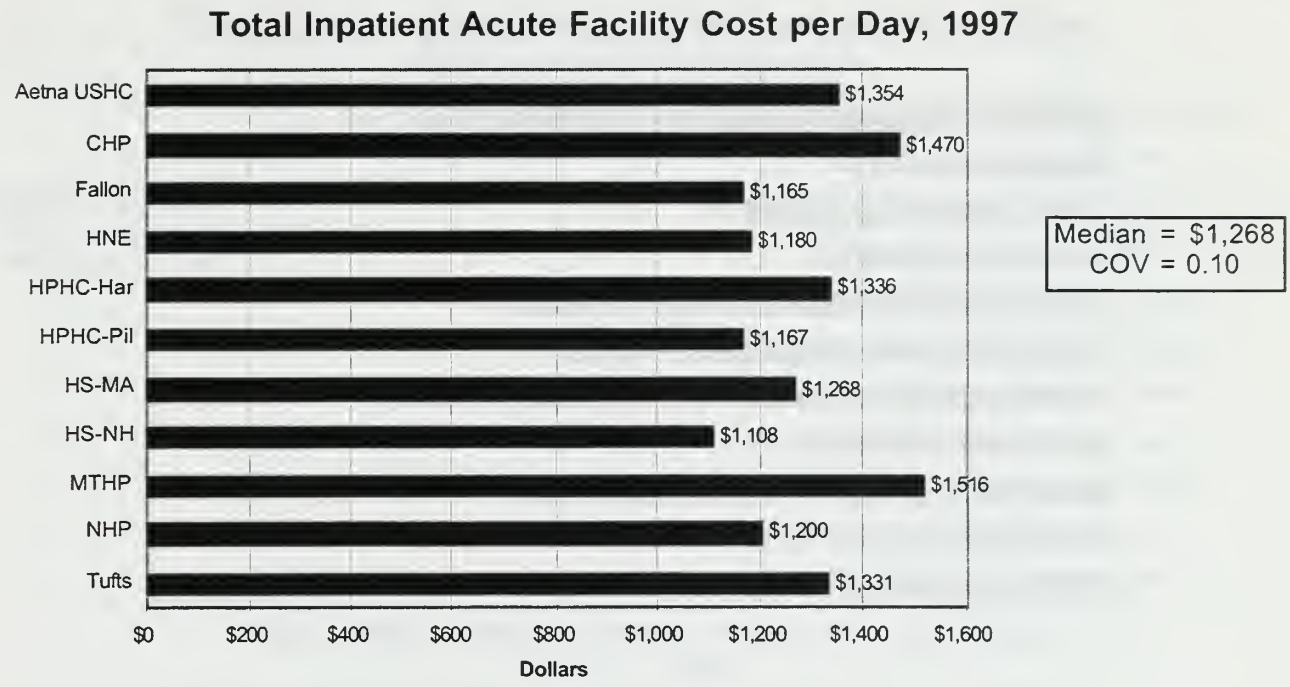


Figure 5.29

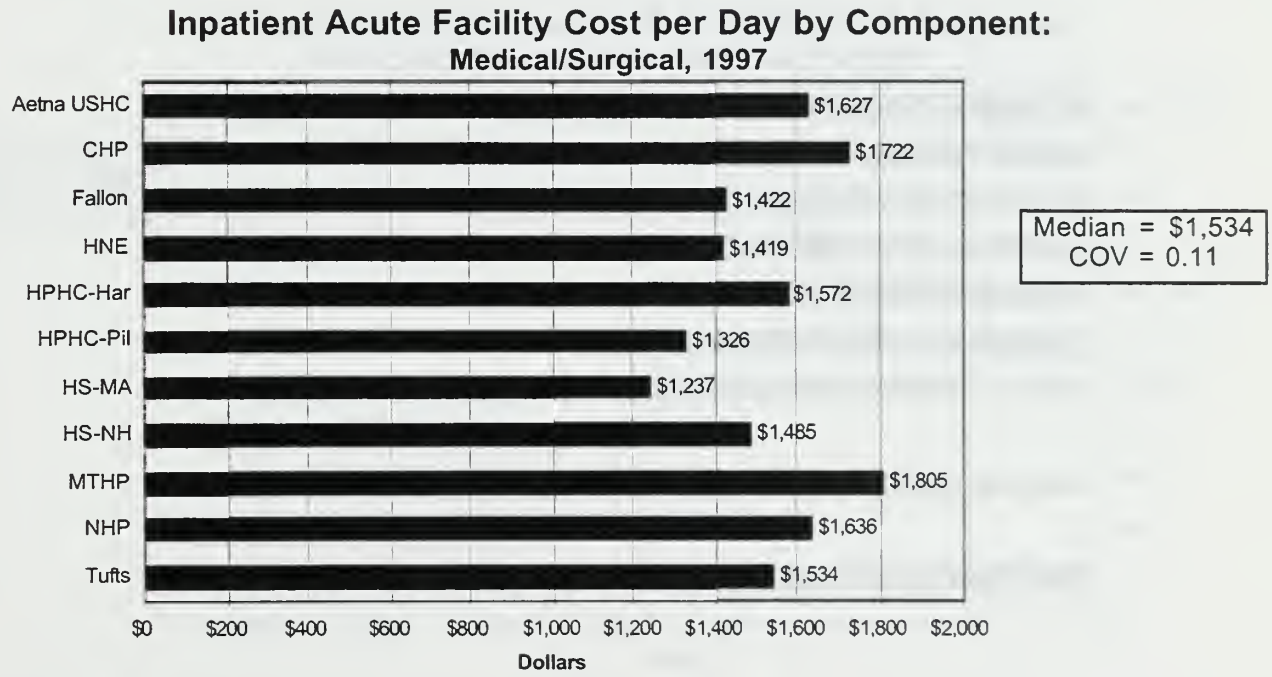


Figure 5.30

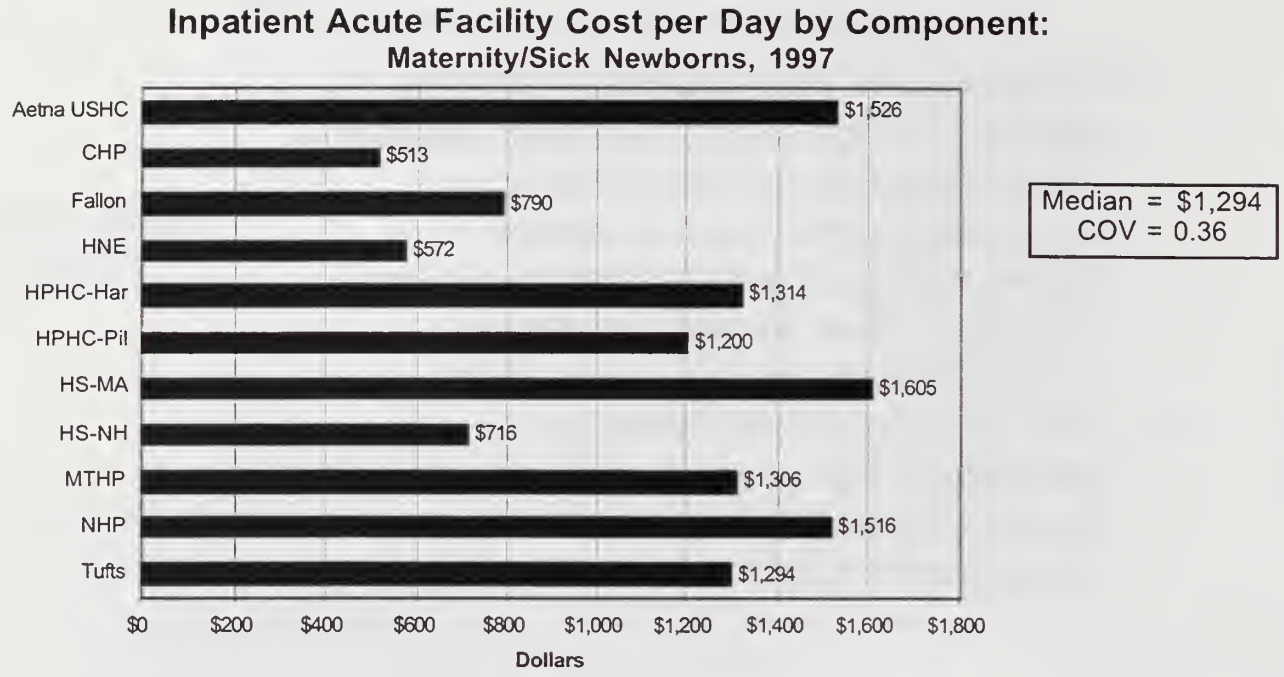


Figure 5.31

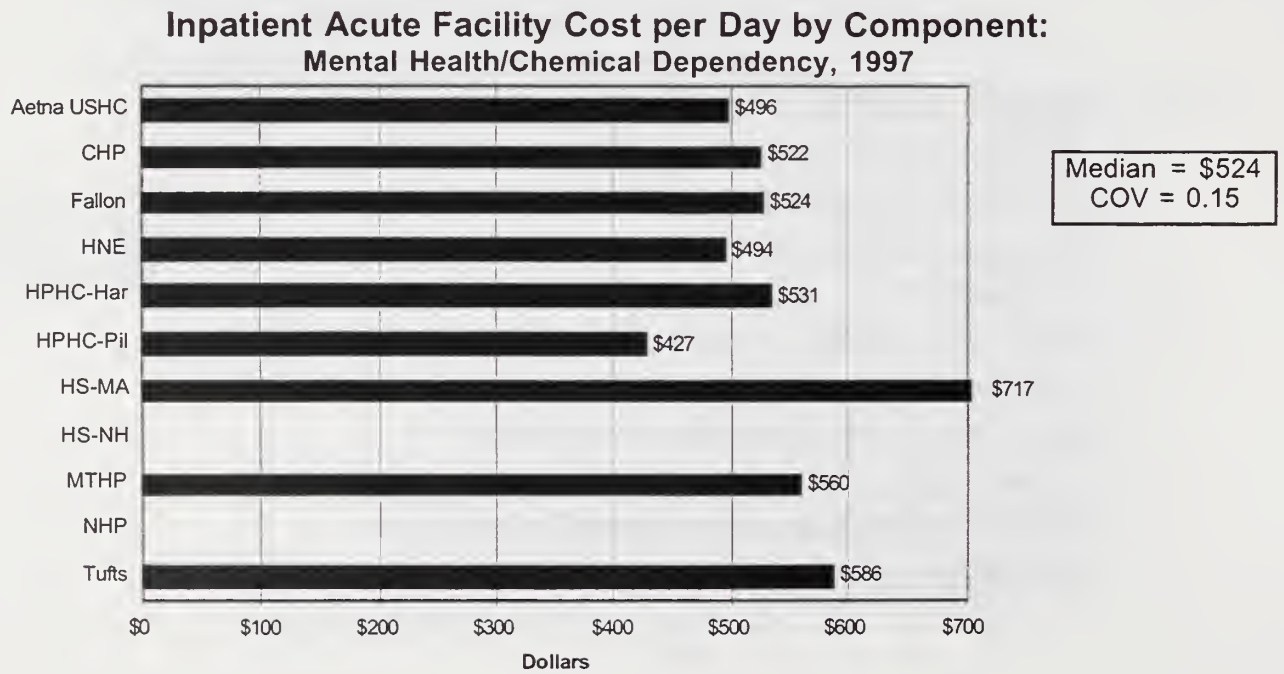


Figure 5.32

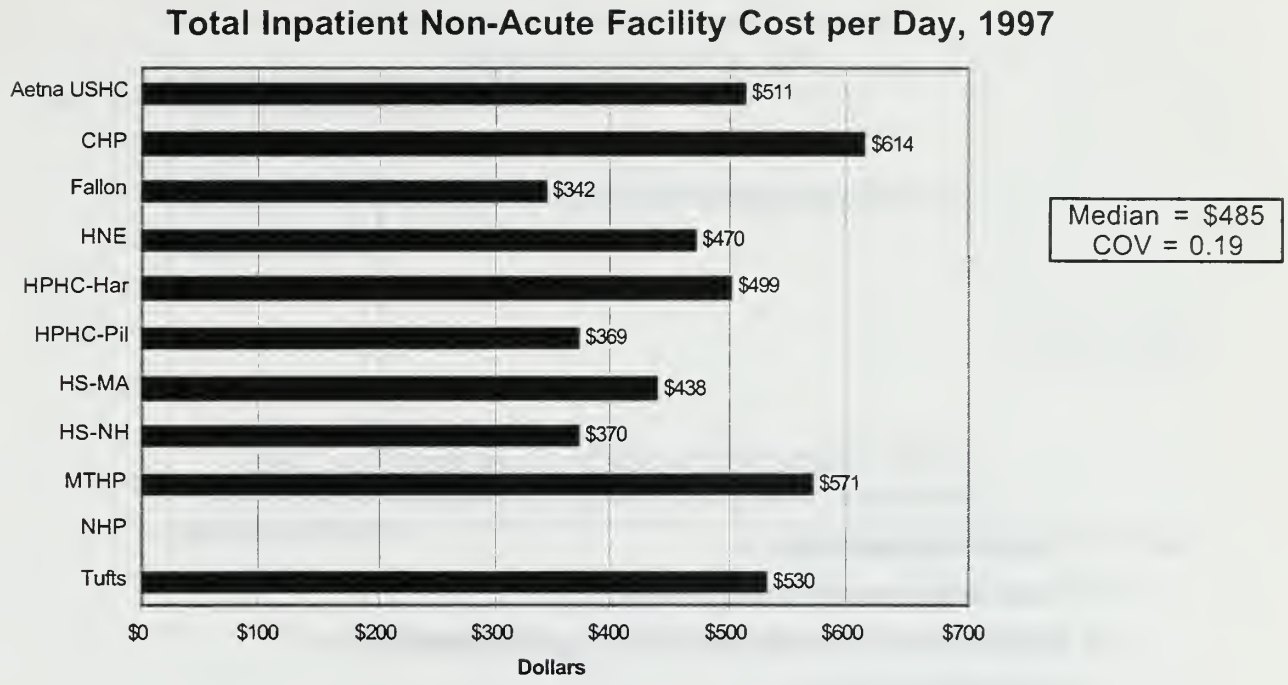

Total Inpatient Non-Acute Facility Cost per Day, 1997
Aetna USHC
CHP
Fallon
HNE
HPHC-Har
HPHC-Pil
HS-MA
HS-NH
MTHP
NHP
Tufts
$511
$614
$342
$470
$499
$369
$438
$370
$571
$530
$0
$100
$200
$300
$400
$500
$600
$700
Dollars
Median = $485
COV = 0.19

Figure 5.33

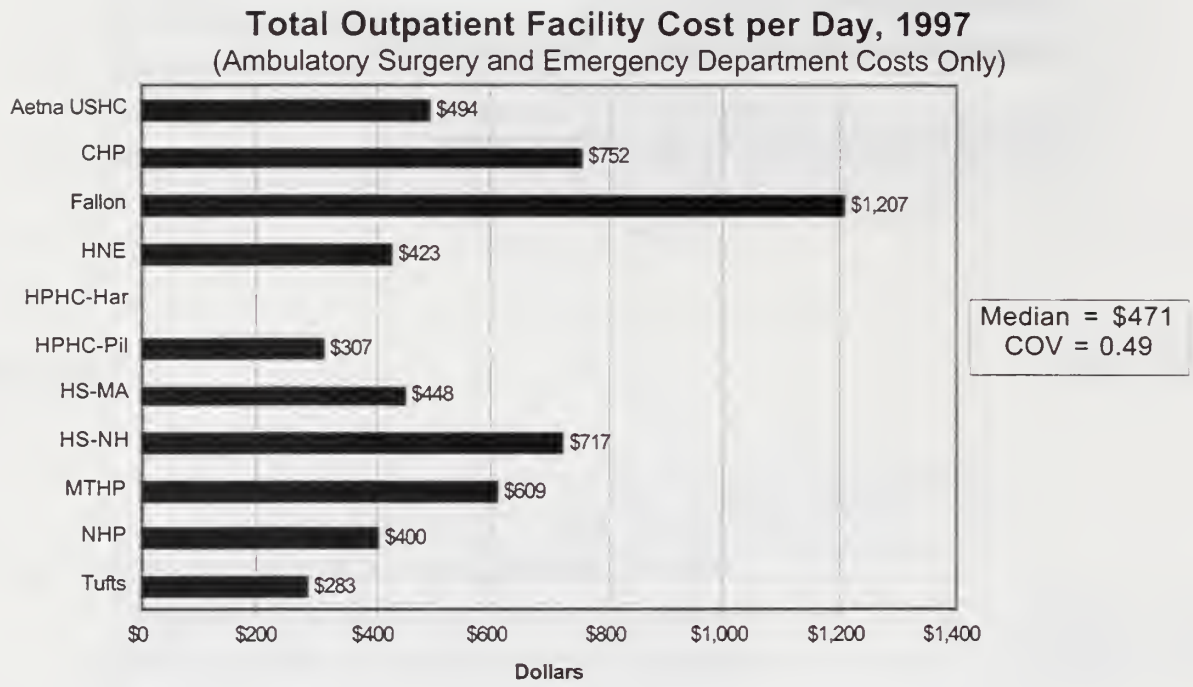

Total Outpatient Facility Cost per Day, 1997
(Ambulatory Surgery and Emergency Department Costs Only)
Aetna USHC
CHP
Fallon
HNE
HPHC-Har
HPHC-Pil
HS-MA
HS-NH
MTHP
NHP
Tufts
$494
$752
$1,207
$423
$307
$448
$717
$609
$400
$283
$0
$200
$400
$600
$800
$1,000
$1,200
$1,400
Dollars
Median = $471
COV = 0.49

Figure 5.34

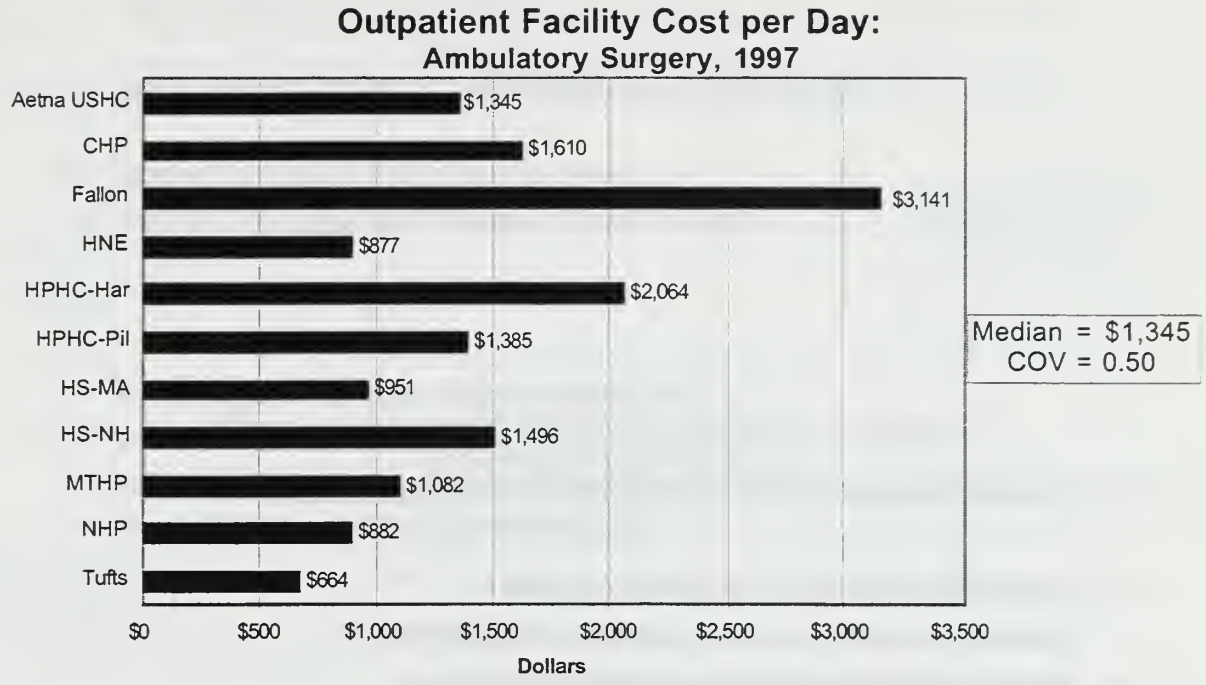


Figure 5.35

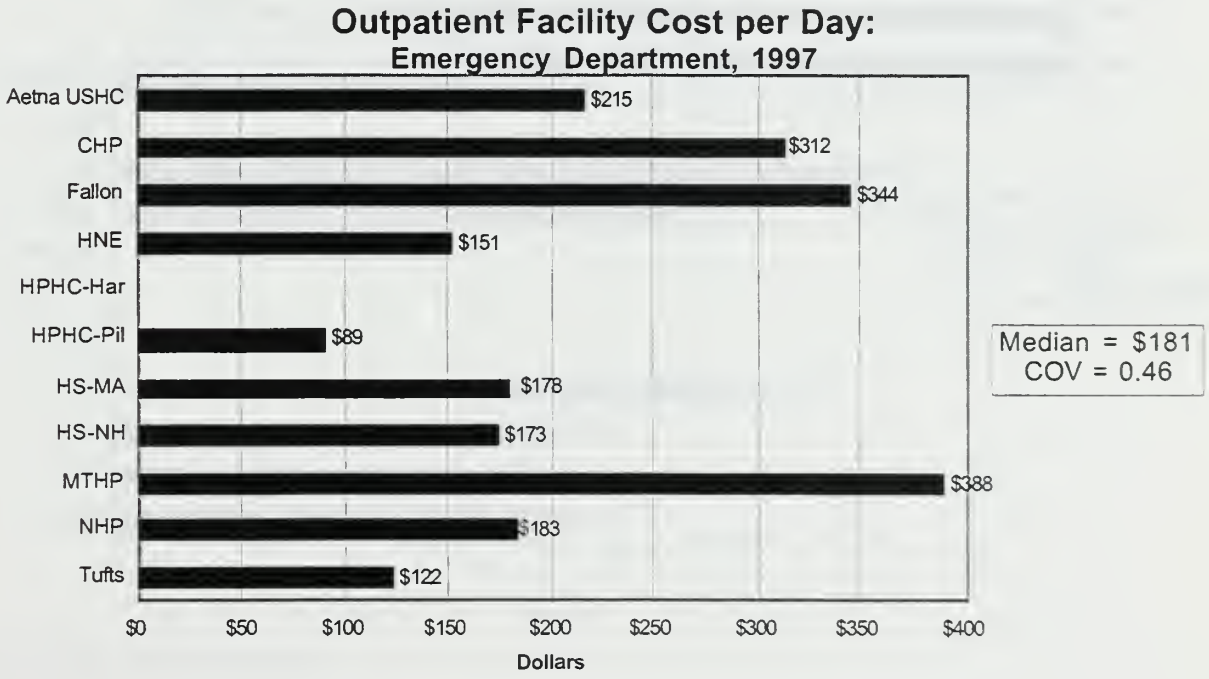
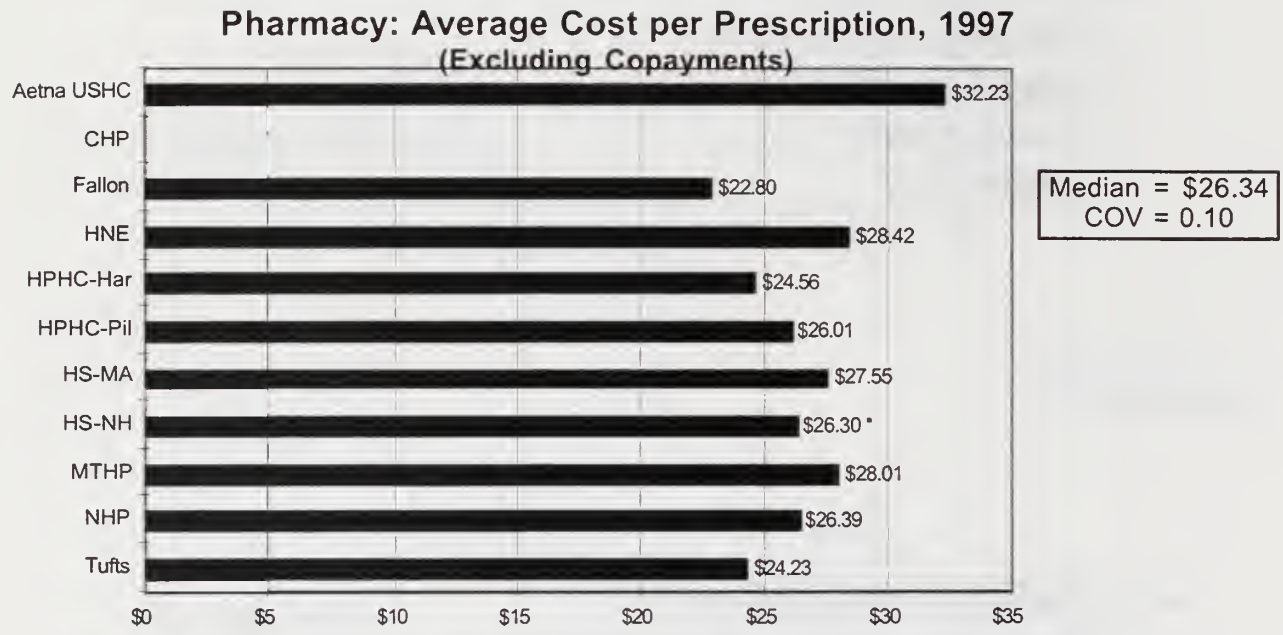
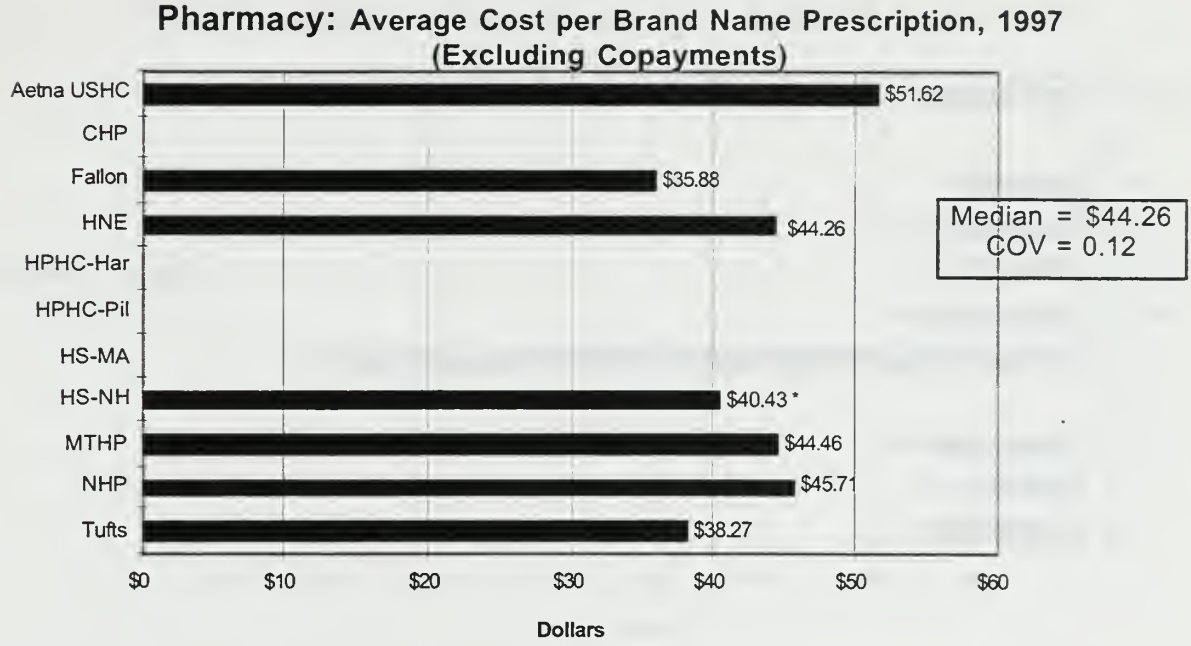


Figure 5.36



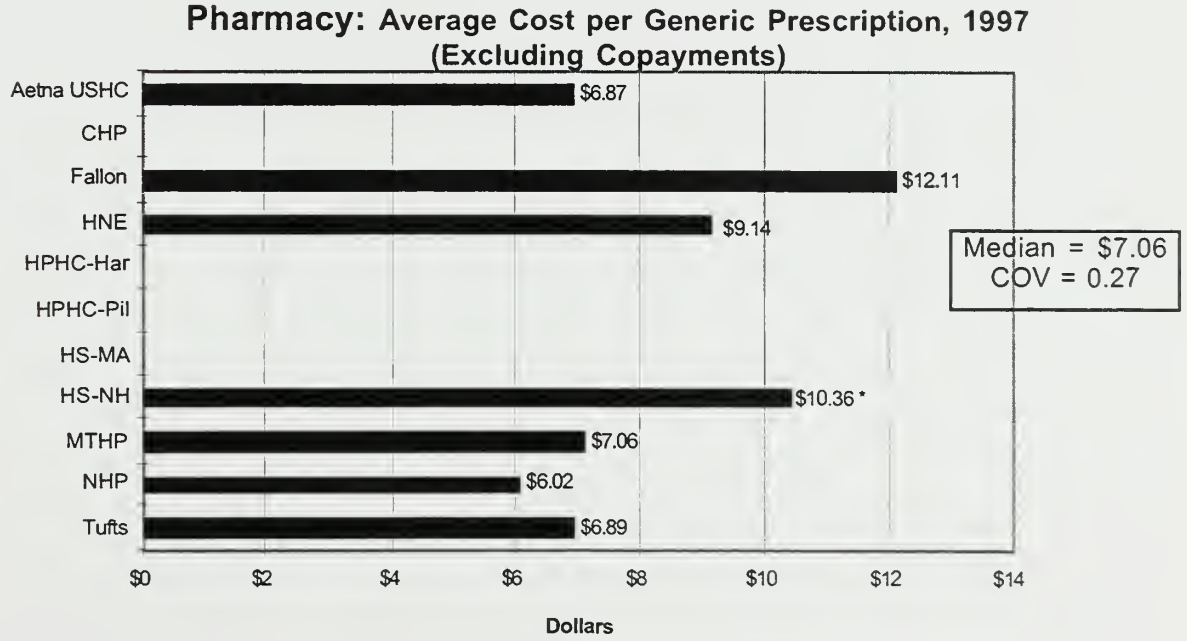
* HS - NH reflects 1996 spending.

Figure 5.37



* HS - NH reflects 1996 spending.

Figure 5.38



* HS - NH reflects 1996 spending.

Figure 5.39

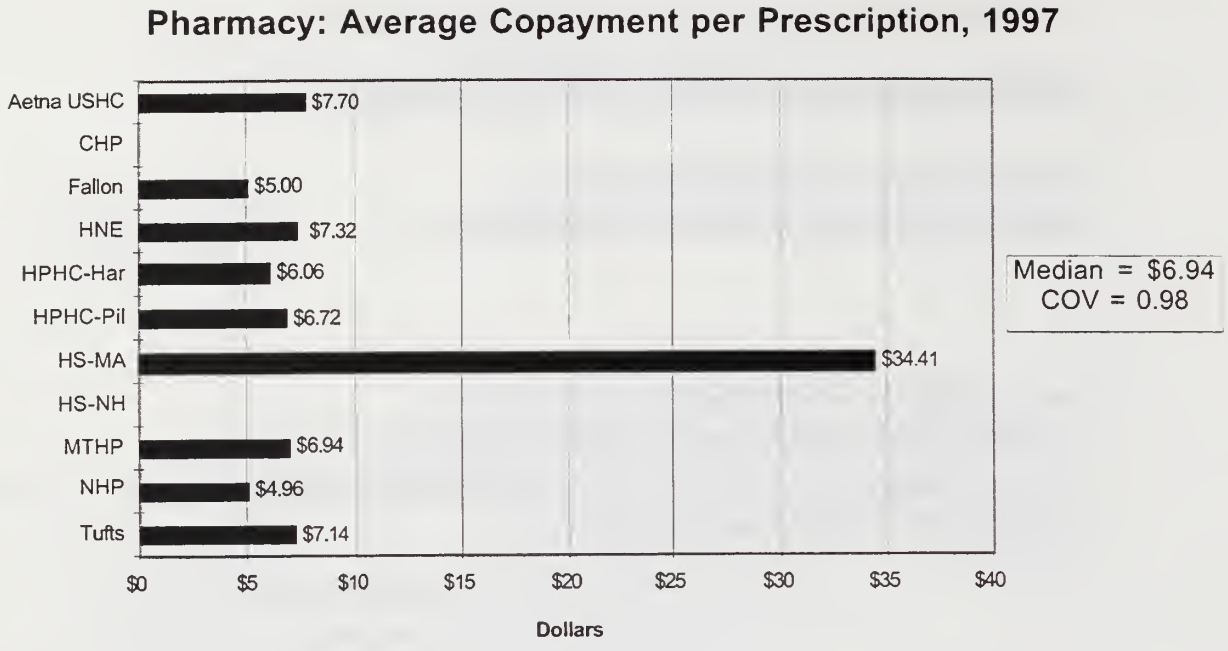
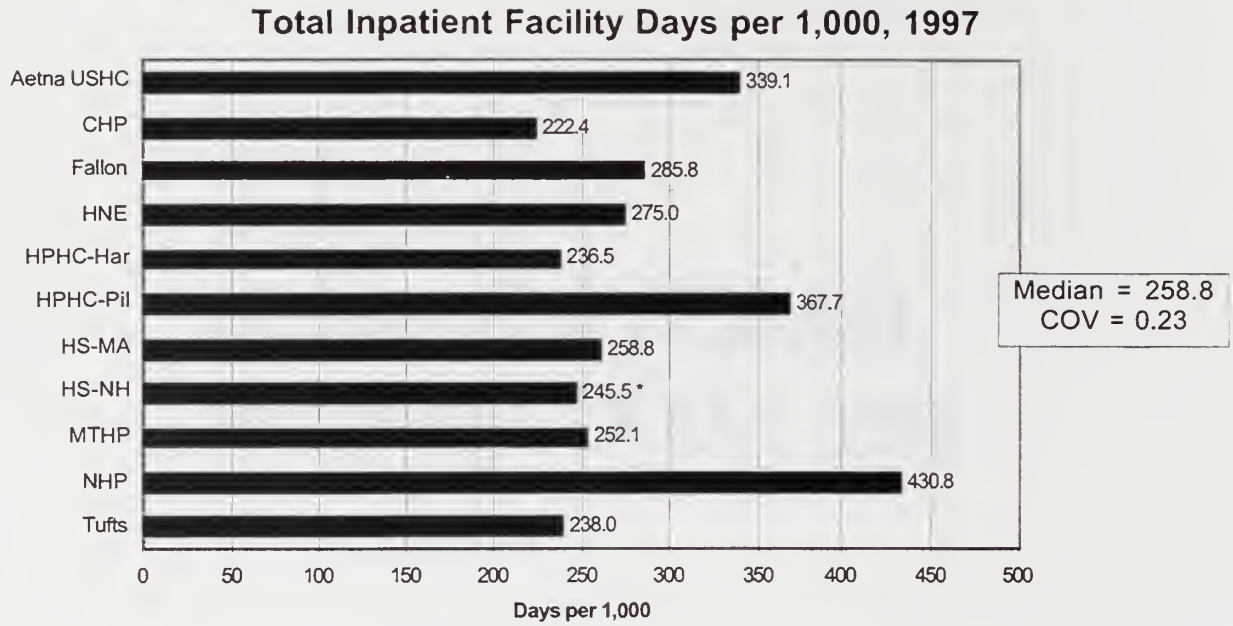

Pharmacy: Average Copayment per Prescription, 1997
Aetna USHC
CHP
Fallon
HNE
HPHC-Har
HPHC-Pil
HS-MA
HS-NH
MTHP
NHP
Tufts
$7.70
$5.00
$7.32
$6.06
$6.72
$34.41
$6.94
$4.96
$7.14
$0
$5
$10
$15
$20
$25
$30
$35
$40
Dollars
Median = $6.94
COV = 0.98

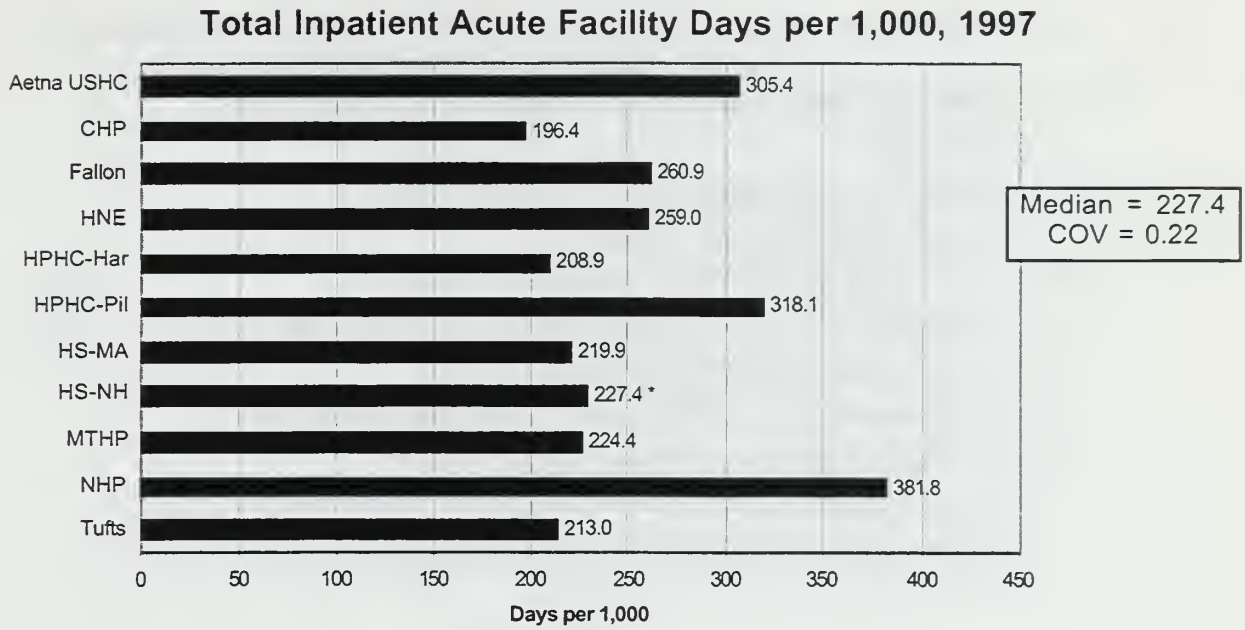
Figure 5.40

HMO Utilization per 1,000 Members



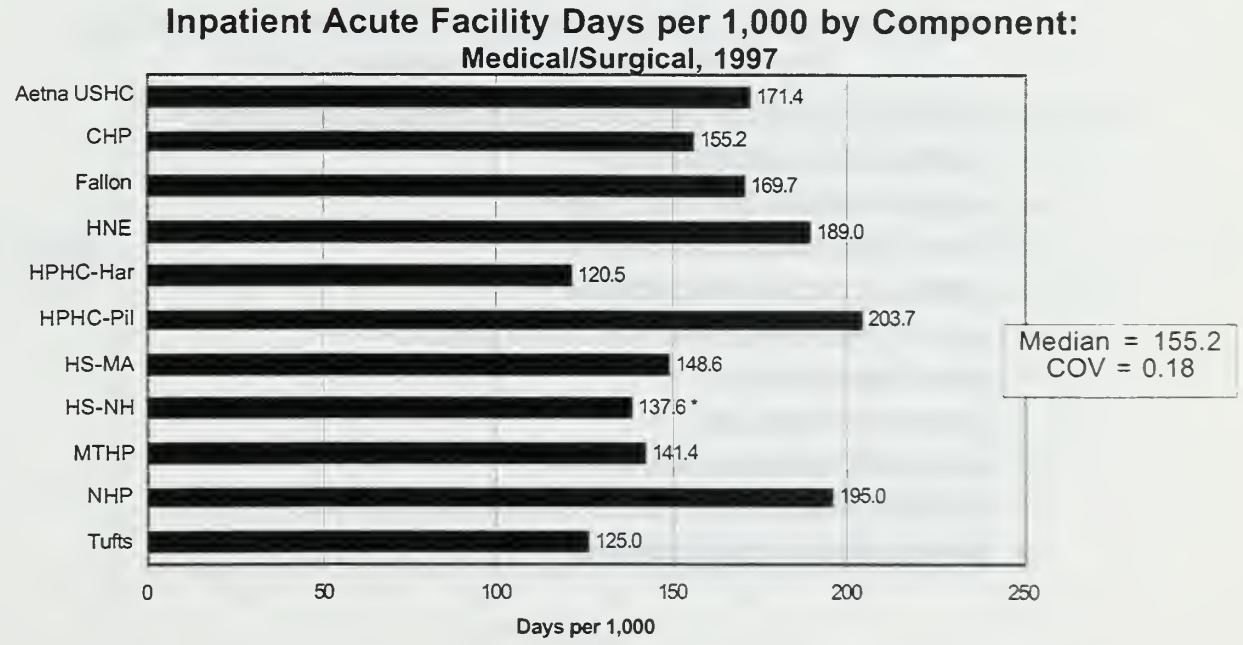
* HS-NH reflects 1996 utilization levels.

Figure 5.41



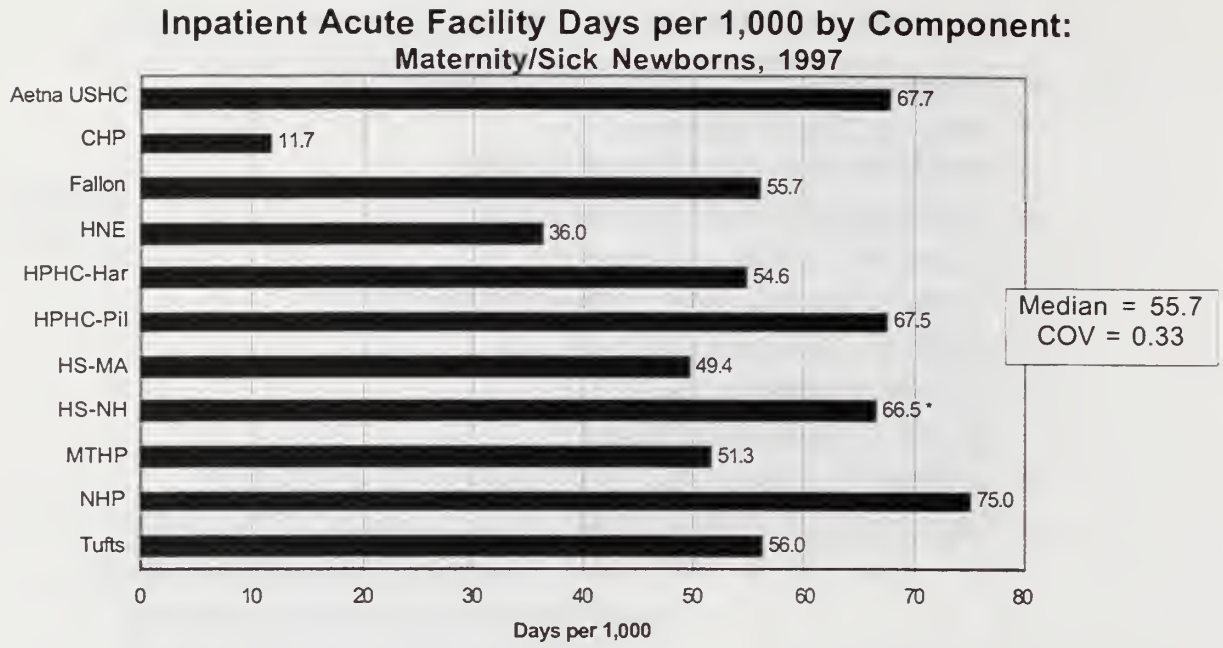
* HS-NH reflects 1996 utilization levels.

Figure 5.42



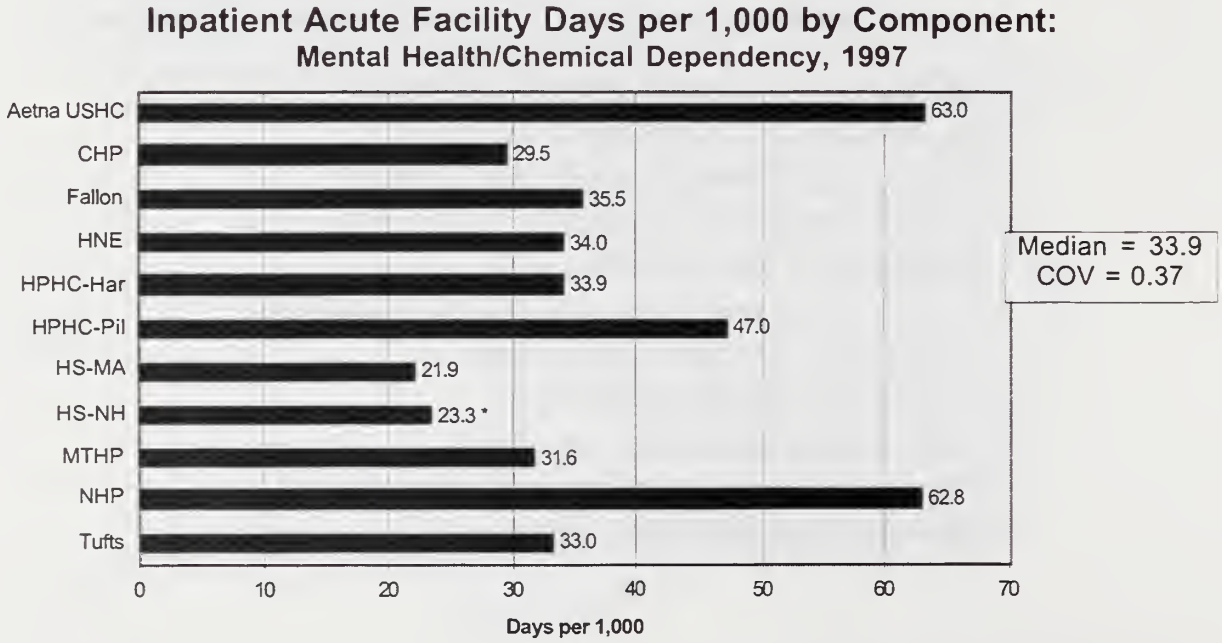
* HS-NH reflects 1996 utilization levels.

Figure 5.43



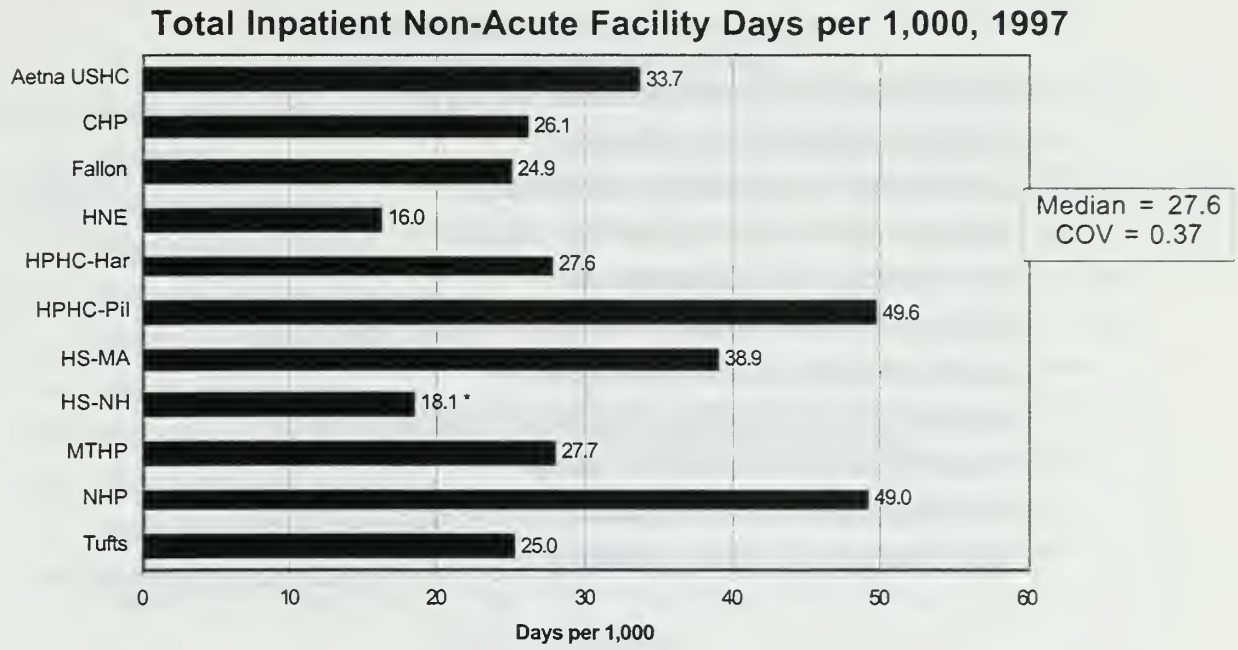
* HS-NH reflects 1996 utilization levels.

Figure 5.44



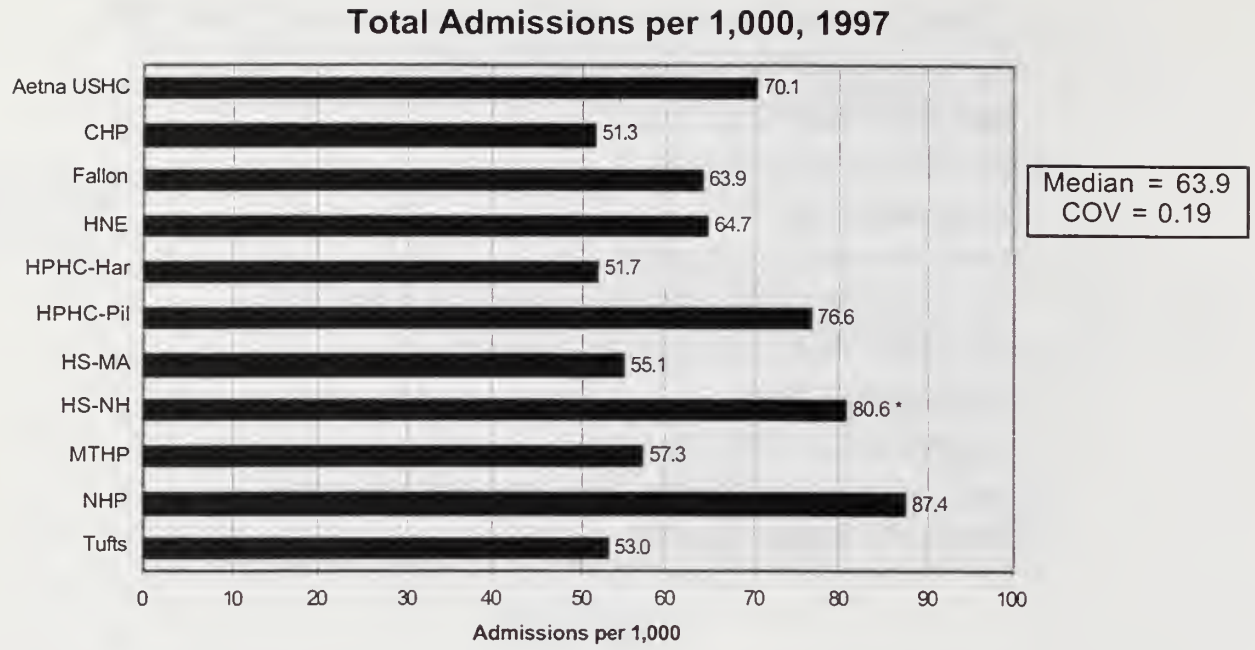
* HS-NH reflects 1996 utilization levels.

Figure 5.45



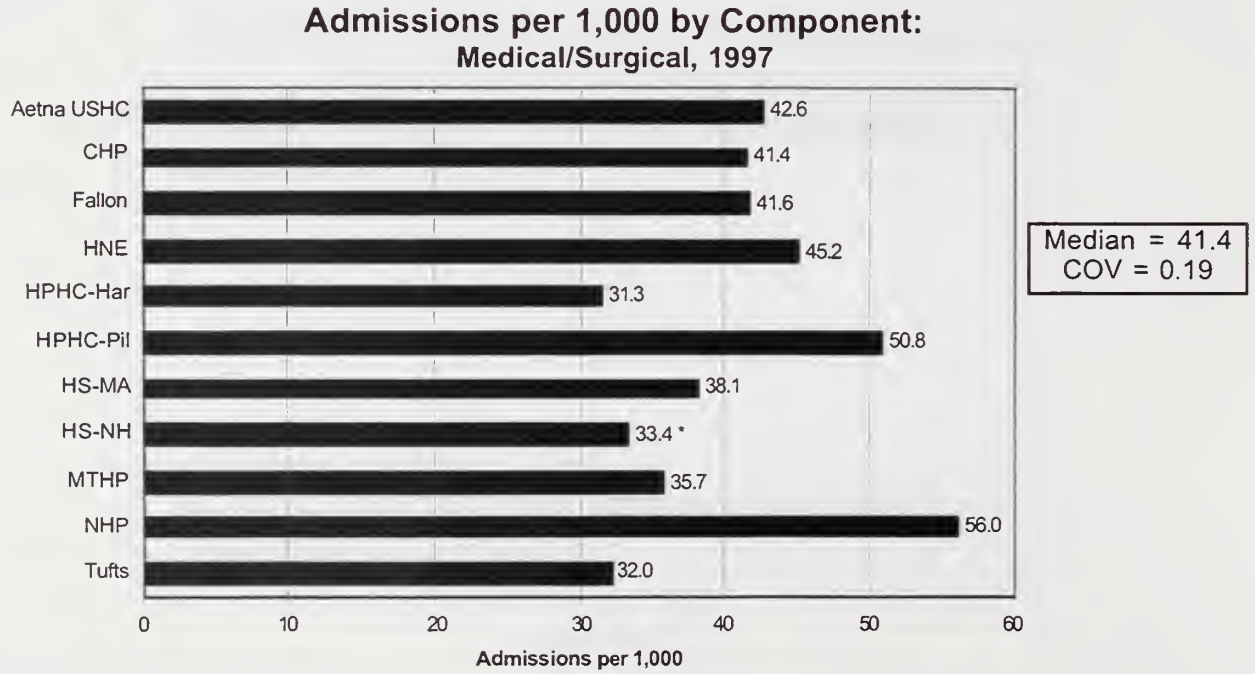
* HS-NH reflects 1996 utilization levels.

Figure 5.46



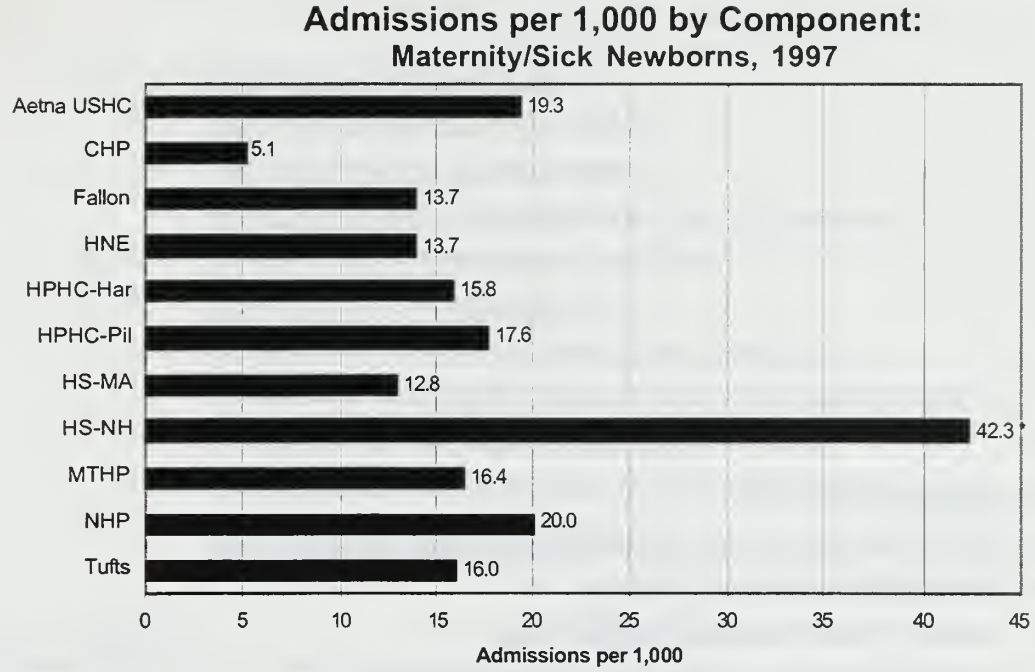
* HS-NH reflects 1996 utilization levels.

Figure 5.47



* HS-NH reflects 1996 utilization levels.

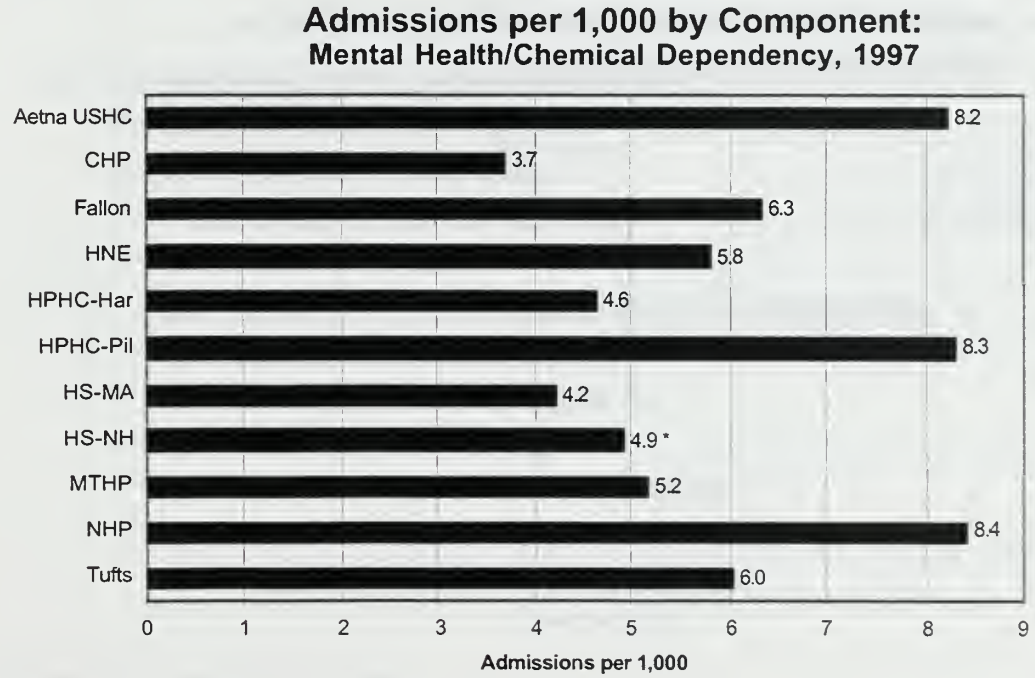
Figure 5.48



Median = 16
COV = 0.52

* HS-NH reflects 1996 utilization levels.

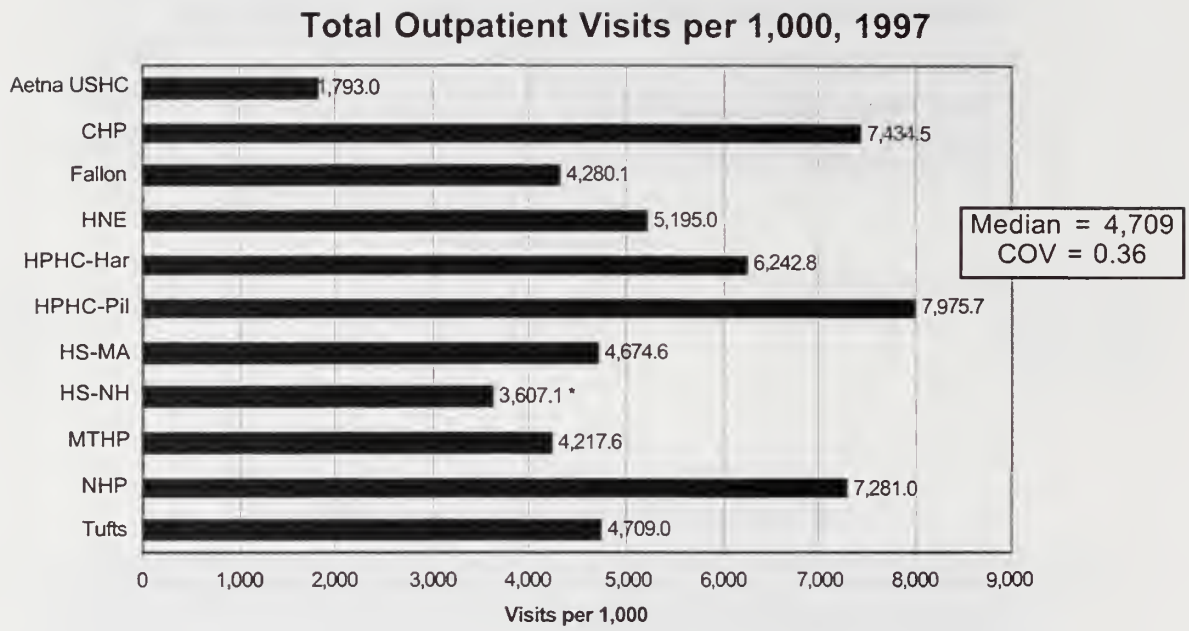
Figure 5.49



Median = 5.8
COV = 0.28

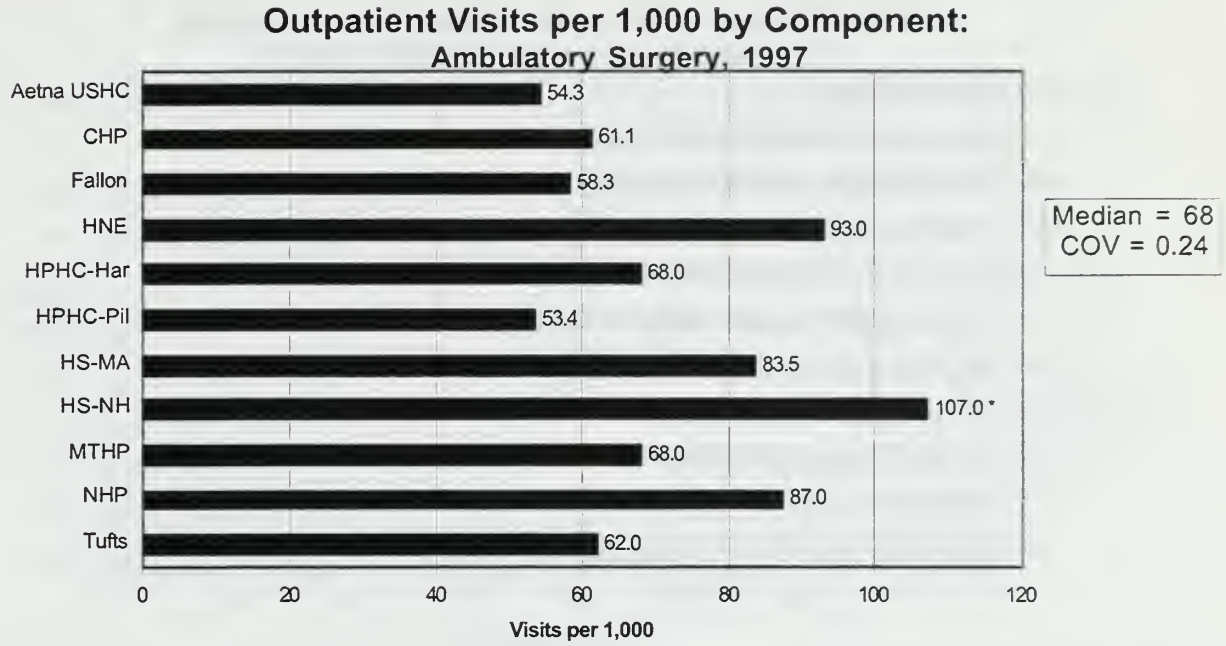
* HS-NH reflects 1996 utilization levels.

Figure 5.50



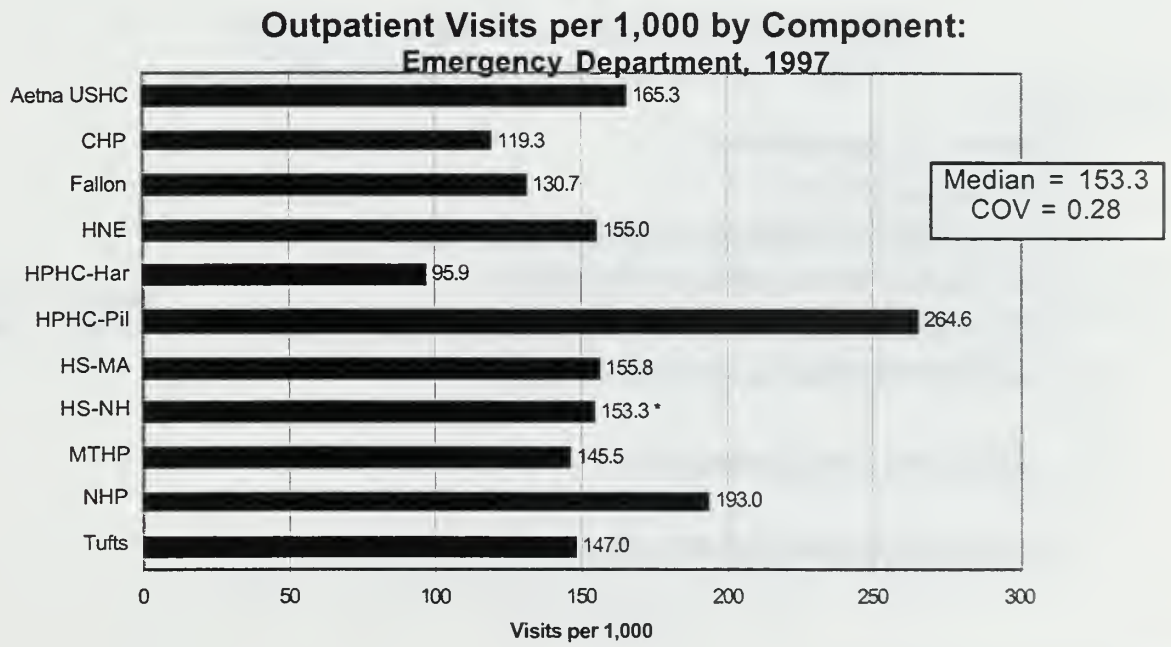
* HS-NH reflects 1996 utilization levels.

Figure 5.51



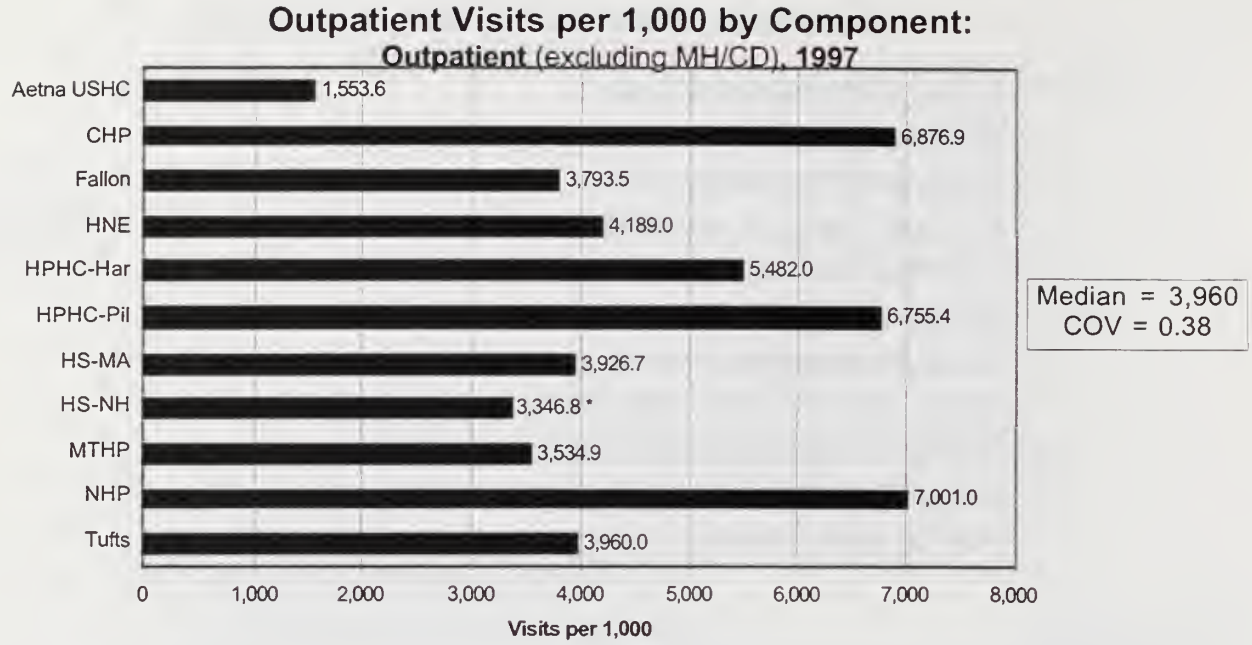
* HS-NH reflects 1996 utilization levels.

Figure 5.52



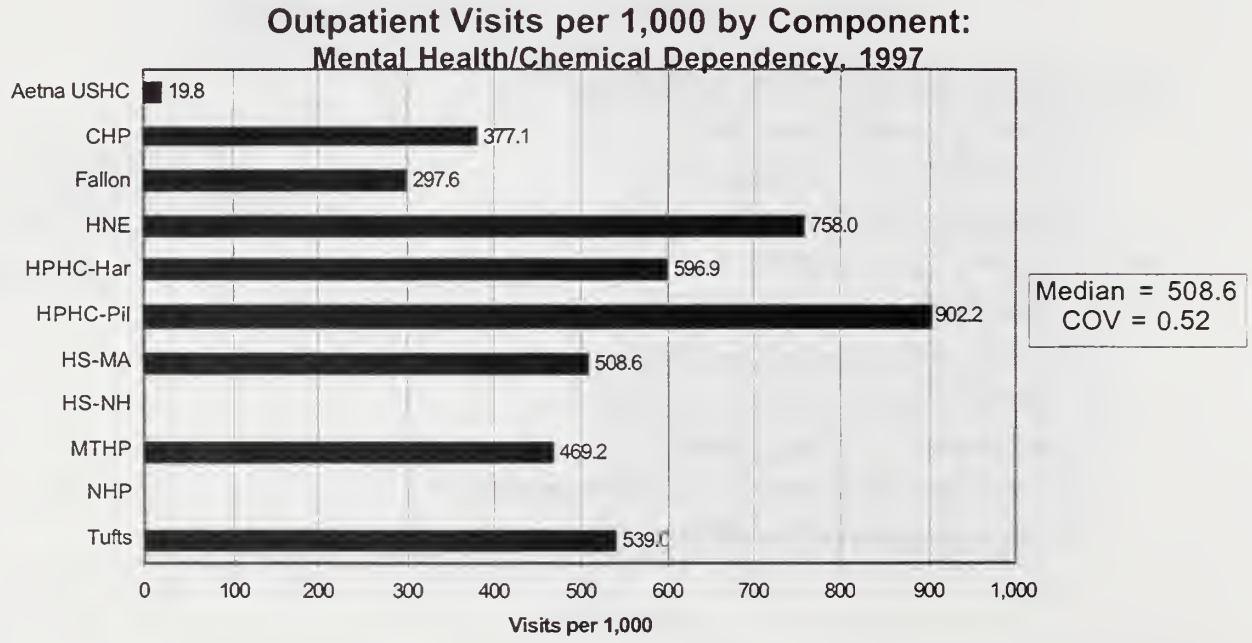
* HS-NH reflects 1996 utilization levels.

Figure 5.53



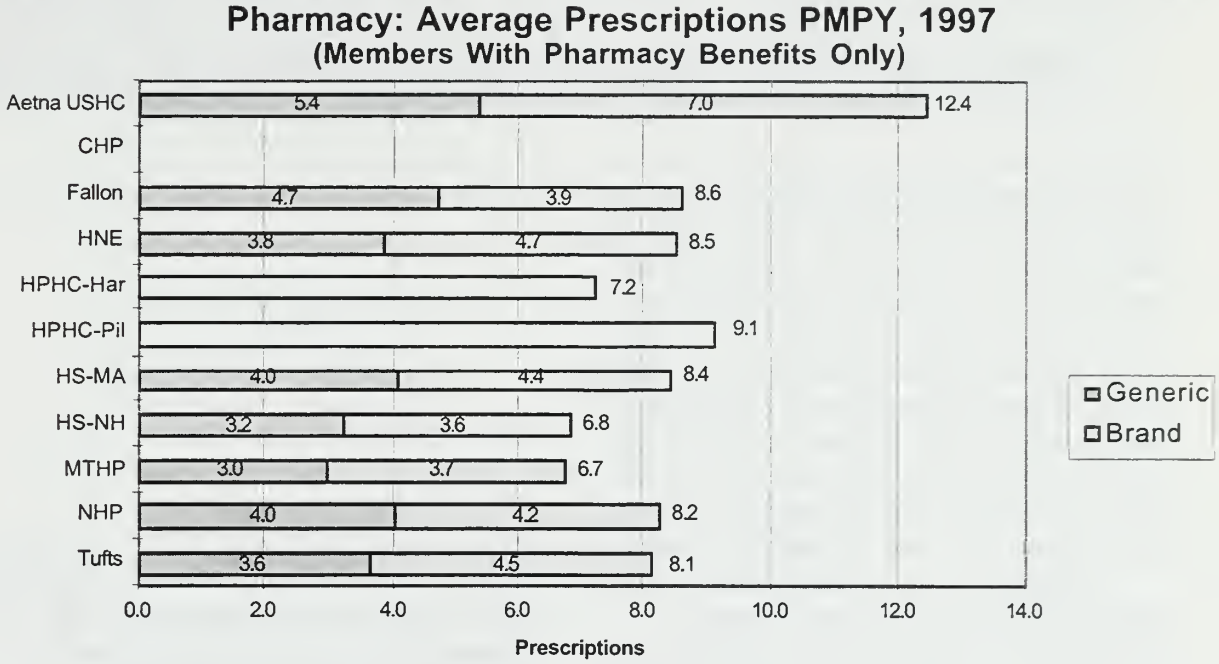
* HS-NH reflects 1996 utilization levels.

Figure 5.54



* HS-NH reflects 1996 utilization levels.

Figure 5.55



* HS-NH reflects 1996 utilization levels.

Figure 5.56

Appendix A: Data Submission and Methodological Issues

We did not replicate the extended data verification process used in the first HMO rate analysis report published by the Division in 1997. However, whenever questions or uncertainties arose regarding the accuracy or interpretation of the data, the submitting HMO was contacted to seek clarification. Further, HMO results were not adjusted for age and gender, or other correlates of spending. Nor did we attempt to control for differences in member benefits. Finally, readers should keep in mind that the data in this report are self-reported. It was not always possible to verify the consistency of reporting across HMOs for the more disaggregated components of spending. Further details regarding data submission are provided in Figure A.1 on page X.

The figures presented in Chapter 2 are taken from Milliman and Robertson's *1997 HMO Intercompany Rate Survey*. The results of that survey were adjusted for geographical differences in the cost of producing medical services using a weighted average of area wages. Average wages for each of the nine regions plus Massachusetts were calculated using data from the March 1996 Current Population Survey. The figures in this section reflect the period from July 1996 to June 1997.

For Chapter 3, Aetna USHC and CHP were unable to submit information on non-medical spending. Although Aetna USHC and CHP were unable to provide non-medical spending data, they were included in the aggregate averages by using projections of their non-medical spending. These projections were based on data submitted by USHC and CHP for the first HMO rate analysis report. The percentages given for the broader spending categories may not equal the sum of their components due to differing numbers of respondents in some categories.

Chapter 4 is based on simple averages across participating HMOs. Two HMOs, Aetna/USHC and CHP, failed to submit data on non-medical spending. However, by using projections of their non-medical spending based on data submitted for the first HMO rate analysis report, we were able to include them in the sector-wide averages.

In Chapter 5, the degree of variation in each category relative to its mean is summarized by the coefficient of variation (COV). The COV divides the total of each HMO's difference from the group average by the group average. The closer the COV is to zero, the lower the amount of variation across HMOs. As the value of the COV increases, the degree of variation among HMOs increases. It is important to note that the variation in a particular category is not necessarily reflected in the range from the high to low values. A category with a wide range from the minimum value to the maximum value may have a low variation if all other HMOs are clustered around the mean. Conversely, a category with a narrow range may have a high variation if all HMOs lie close to either the minimum or maximum values.

Data Caveats

When an HMO's reporting definition deviated from the definitions defined by the survey, we omitted that HMO's measure from the determination of the median, and from the graphs and tables of that measure.

HMO Name	Data Issue
Aetna US Healthcare	Aetna USHC did not submit non-medical spending data. Non-medical spending was estimated using 1995 proportion of total spending for averages and aggregate measures.
Community Health Plan	CHP was unable to submit non-medical and pharmacy spending data. Non-medical spending was estimated using 1995 proportion of total spending for averages and aggregate measures. Pharmacy was estimated by adjusting 1995 data for the average increase in pharmacy spending.
Harvard Pilgrim Healthcare - Harvard	HPHC-Harvard did not submit disaggregated data for many of the categories requested on the survey.
Harvard Pilgrim Healthcare - Pilgrim	HPHC-Harvard did not submit disaggregated data for many of the categories requested on the survey.
Healthsource New Hampshire	HS-NH 1997 utilization data was not available at the time this report was produced. 1996 utilization levels were substituted.
HMO Blue	HMO Blue decided not to participate in the study.
Kaiser Foundation Health Plans	Kaiser submitted enrollment information only.

Figure A.1

Appendix B: Summary HMO Profiles

Appendix B consists of summary profiles for each of the 11 HMOs that participated in the study.

Each HMO profile is prefaced by a summary text box that highlights areas where that particular HMO diverged from the sector-wide median. As a point of reference for readers, the median values for the major service categories are repeated in Figure B.1 below.

The purpose of this section is to give the purchaser a quick and easy overview of the aggregate spending, unit cost and utilization patterns for each of the individual HMOs. The HMO profiles also include information on the age, sex and area of residence composition of each plan.

Spending, Unit Cost & Utilization Medians

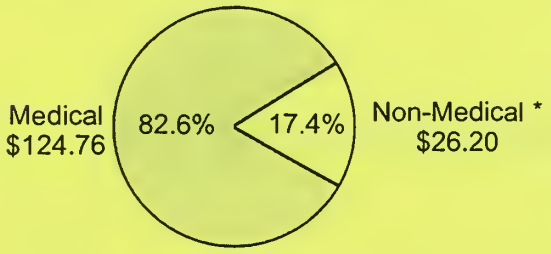
Spending	
Total PMPM	$143.06
Medical PMPM	$124.79
Inpatient Facility	$26.69
Outpatient Facility	$33.14
Professional	$48.74
Pharmacy (all members, excluding copays)	$15.51
Non-Medical PMPM	$18.27
Administrative	$17.03
Surplus	$0.00
Other Non-Medical	$0.10
Facility Cost per Day	
Inpatient Acute	$1,268.00
Inpatient Non-Acute	$485.00
Outpatient	$471.00
Utilization	
Acute Days/1,000 Members	227.40
Non-Acute Days/1,000 Members	27.60
Outpatient Visits/1,000 Members	4,709.00

Figure B.1

Aetna US Healthcare

Aetna USHC spent at the median value for medical care. The plan spent significantly more than the median for inpatient services, slightly more than the median for outpatient services, and significantly less than the median for physician services. Its higher spending for inpatient services seems to have been driven more by high utilization than by unit costs. The plan's costs per day for inpatient services were only slightly above the median. But Aetna USHC members spent significantly more days in both acute and non-acute hospitals than members of most other plans. In contrast, they had the lowest utilization rate for office visits of all the plans. Both greater utilization and higher unit costs caused the highest pharmacy spending among the plans. Aetna USHC members filed 12.4 prescriptions per year, compared to a median of 8.4 per year. The plan paid an average of $17.32 PMPM for pharmacy, 12% above the median. Aetna USHC did not submit non-medical spending data.

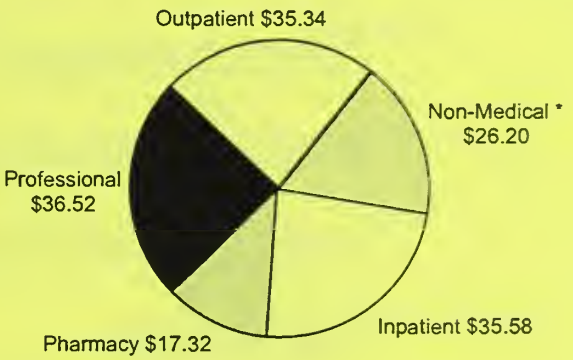
Total Spending PMPM: Medical and Non-Medical, 1997



Total Spending PMPM = $150.96

* Aetna USHC was unable to provide non-medical spending data. Their non-medical spending was estimated using 1995 proportion of total spending.

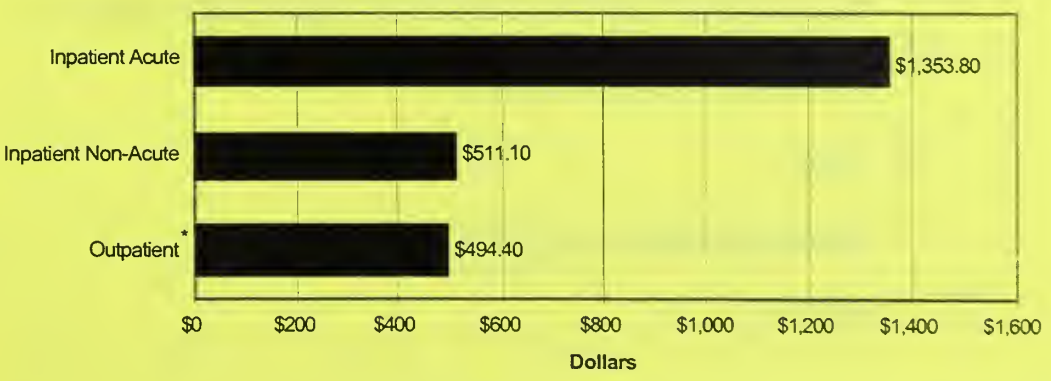
Spending PMPM by Component, 1997



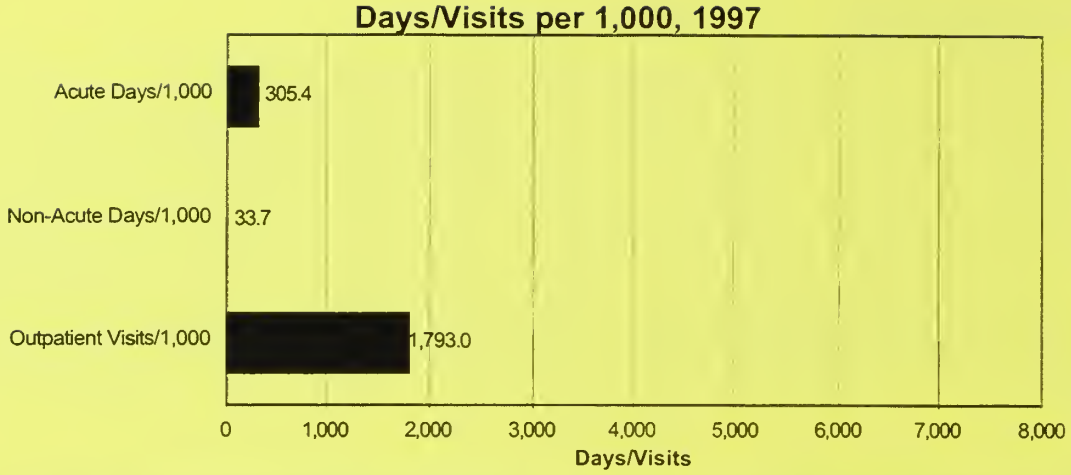
Total Spending PMPM = 150.96

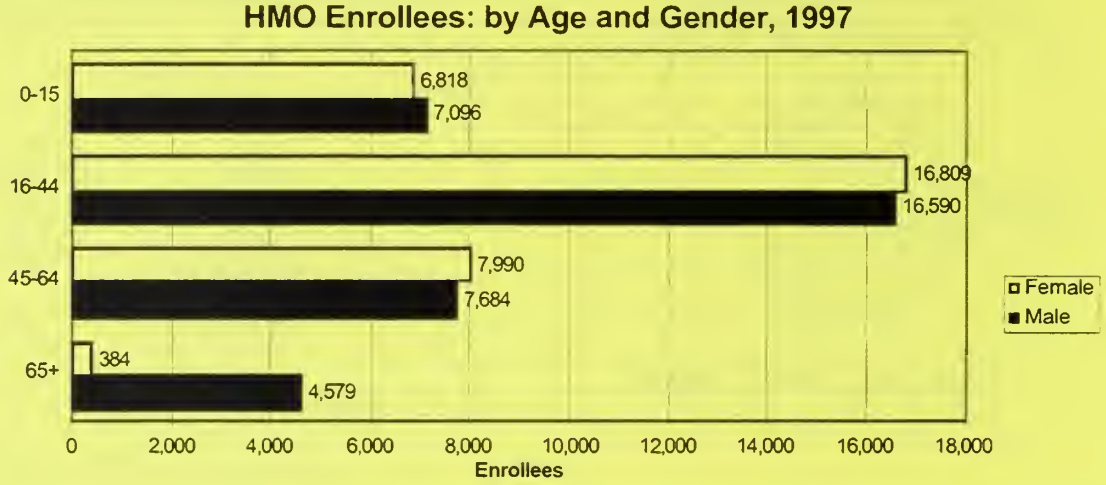
* Aetna USHC was unable to provide non-medical spending data. Their non-medical spending was estimated using 1995 proportion of total spending.

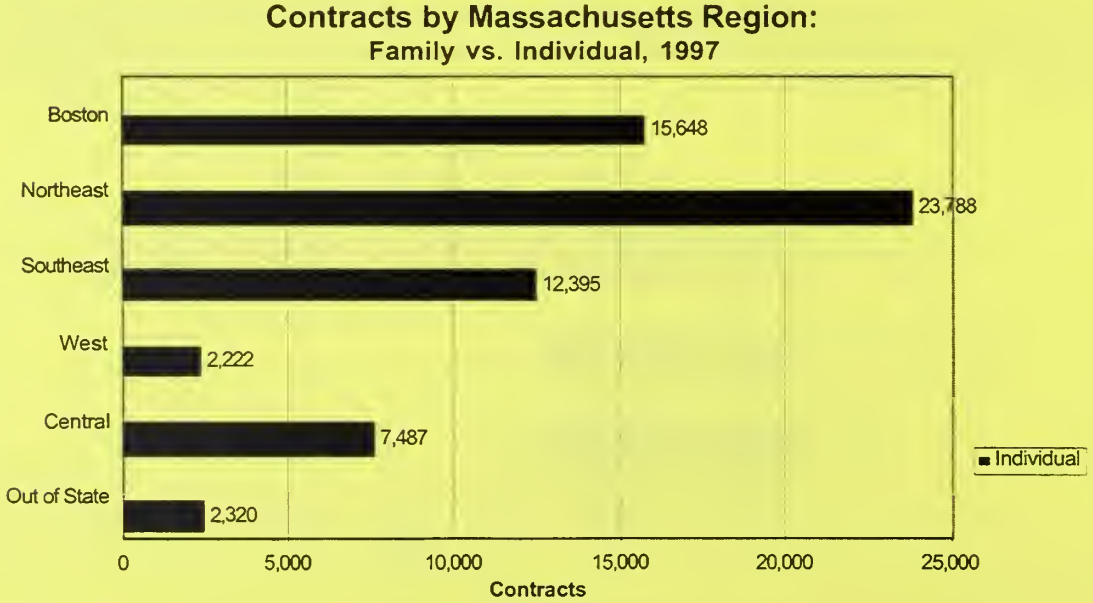
Facility Cost per Day, 1997



*Outpatient reflects only ambulatory surgery and emergency department facility costs.





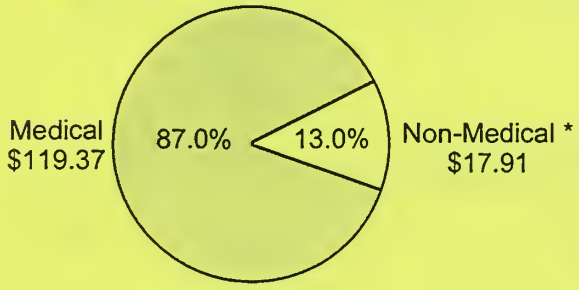


Aetna USHC family contract data were unavailable.

Community Health Plan

CHP spent 4% less on medical care than the median value. Higher unit costs and lower utilization balanced out, so that the overall level of inpatient spending equaled the median. CHP members saw their physicians significantly more than the median. The number of outpatient visits per 1,000 members per year was 58% higher than the median. More frequent outpatient visits help explain why CHP's spending for physician services was above than the median. Outpatient facility costs per day were also significantly above the median. High utilization and high unit costs do not appear to explain the low outpatient facility spending. A probably explanation is that outpatient spending includes components not reflected in utilization. In fact, CHP's spending on radiology and laboratory (two components of outpatient spending) are significantly below the median, which might help explain the lower spending despite the high number of visits and unit costs. CHP was unable to provide information on pharmacy spending. Nor did the plan submit non-medical spending data.

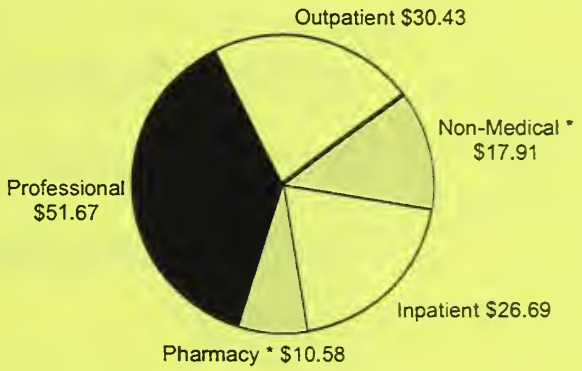
Total Spending PMPM: Medical and Non-Medical, 1997



Total Spending PMPM = $137.28

* CHP was unable to provide non-medical and pharmacy spending data. They were estimated using 1995 proportion of total spending.

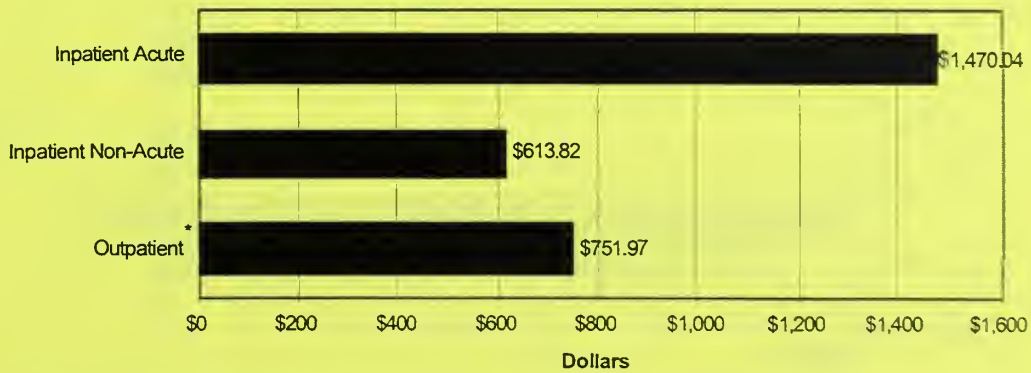
Spending PMPM by Component, 1997



Total Spending PMPM = 137.28

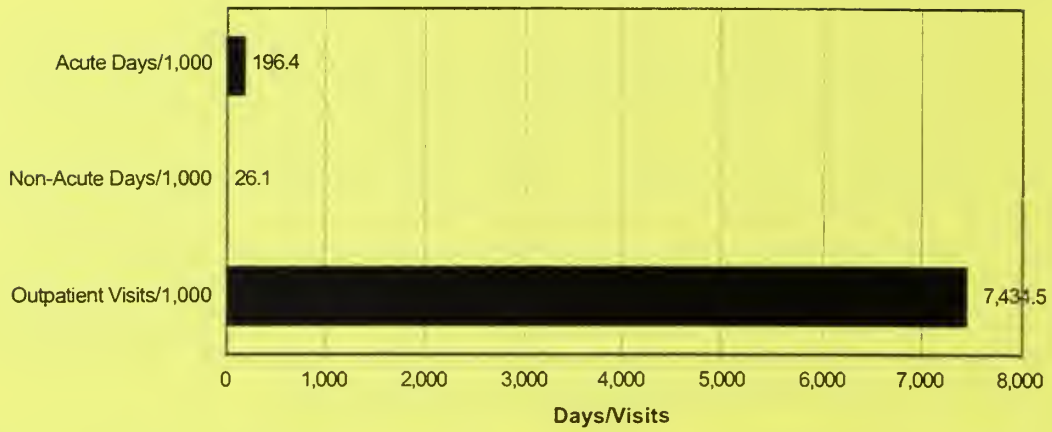
* CHP was unable to provide non-medical and pharmacy spending data. They were estimated using 1995 proportion of total spending.

Facility Cost per Day, 1997

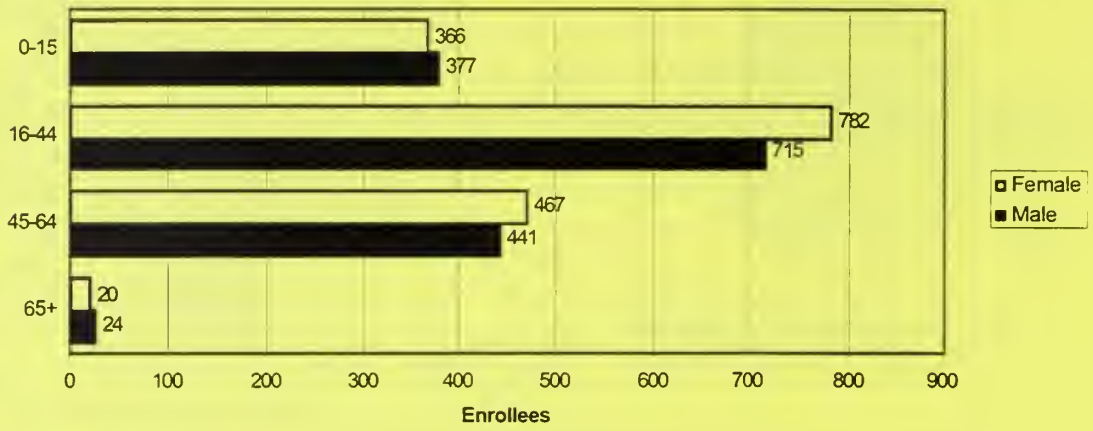


*Outpatient reflects only ambulatory surgery and emergency department facility costs.

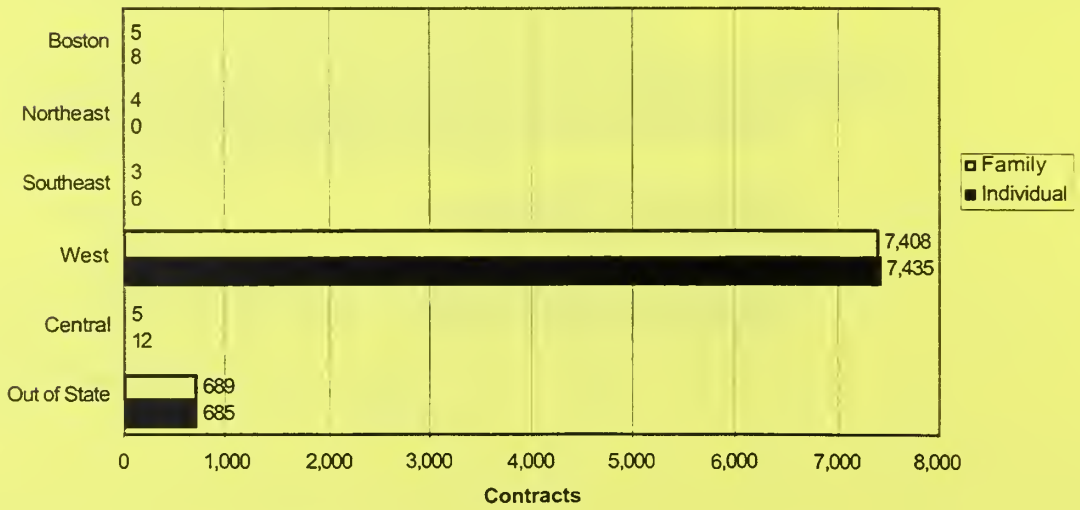
Days/Visits per 1,000, 1997



HMO Enrollees: by Age and Gender, 1997



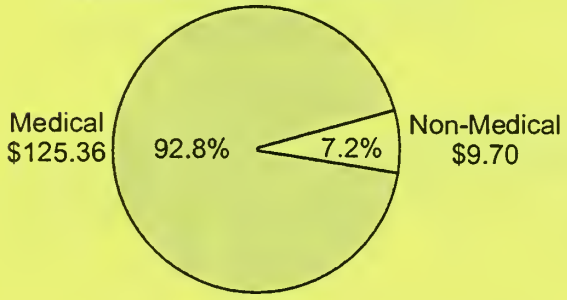
Contracts by Massachusetts Region:
Family vs. Individual, 1997



Fallon Community Health Plans

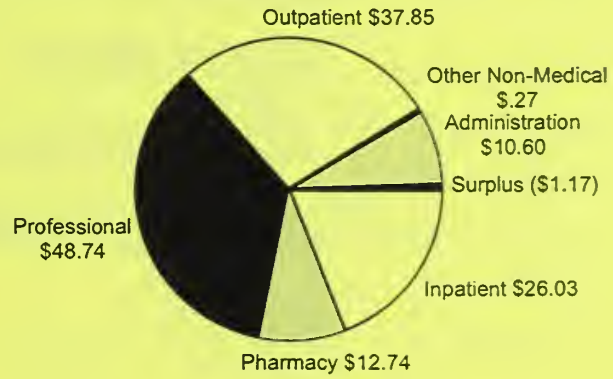
Fallon exhibited one of the lowest levels of total spending of all participating HMOs. The plan's medical spending was equal to the median value. But its non-medical spending was 47% lower than the median, largely due to its low administrative costs. Fallon spent slightly below the median for acute care inpatient services, despite having a utilization rate that was 15% higher. Its costs per acute care inpatient day were 8% less than the median. Fallon members filled slightly more prescriptions than the median. But the plan still spent less in total, because its unit costs for pharmacy were low relative to the median. Outpatient service spending was the only medical cost that was above than the median. Fallon had 9% fewer outpatient visits, but spent more per ambulatory visit than any other HMO. Fallon's spending on professional fees equaled the median.

Total Spending PMPM:
Medical and Non-Medical,1997



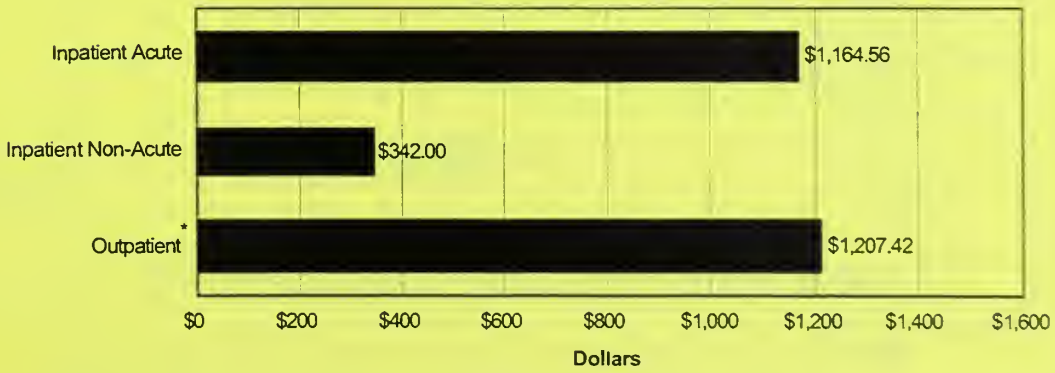
Total Spending PMPM = $135.06

Spending PMPM by Component, 1997



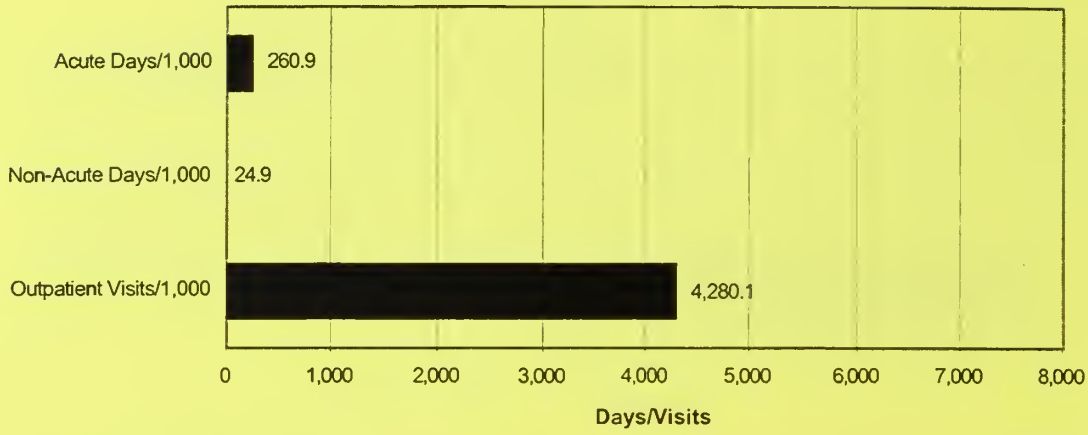
Total Spending PMPM = 135.06

Facility Cost per Day, 1997



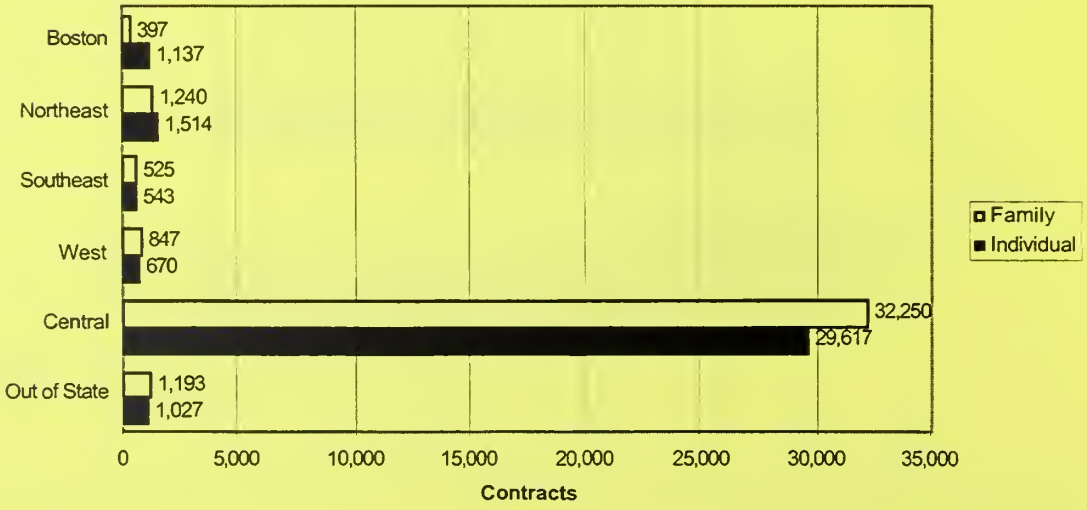
*Outpatient reflects only ambulatory surgery and emergency department facility costs.

Days/Visits per 1,000, 1997



HMO Enrollees: by Age and Gender, 1997

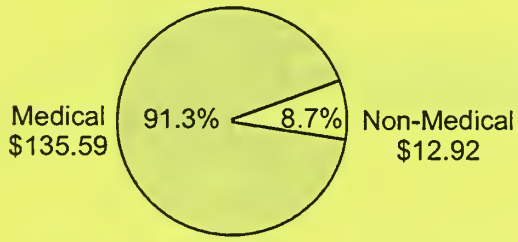
Contracts by Massachusetts Region: Family vs. Individual, 1997



Harvard Pilgrim Health Care – Harvard

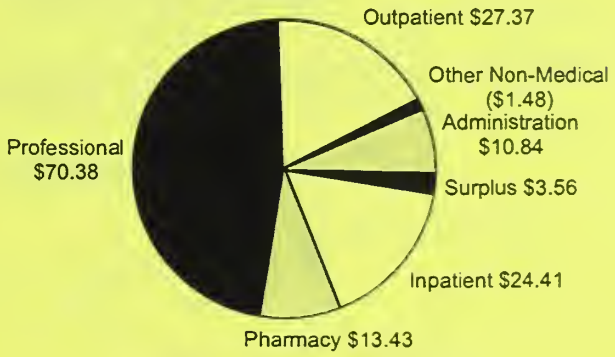
Harvard's total spending was 4% above the median due to a level of medical spending 9% above the median. Very high spending for professional services, higher than all other plans reviewed in this report, drove the higher level of medical spending. Harvard spent below the median for inpatient, outpatient and pharmacy services. Its utilization of acute care inpatient days fell below the median, while its number of outpatient visits was 33% higher than the median. Unit costs for professional services were not available. But it seems likely that Harvard was spending more per physician visit than the median since the high level of utilization alone is unlikely to account for a level of professional spending 44% higher than the median. Although Harvard did not submit unit costs for total outpatient facility, its ambulatory surgery costs per visit (a major component of outpatient spending) were among the highest. It is unclear why outpatient spending is below the median. Harvard members filled slightly fewer prescriptions per year than the median and its cost per prescription was relatively low. Harvard's level of administrative spending was among the lowest of all HMOs.

Total Spending PMPM:
Medical and Non-Medical, 1997



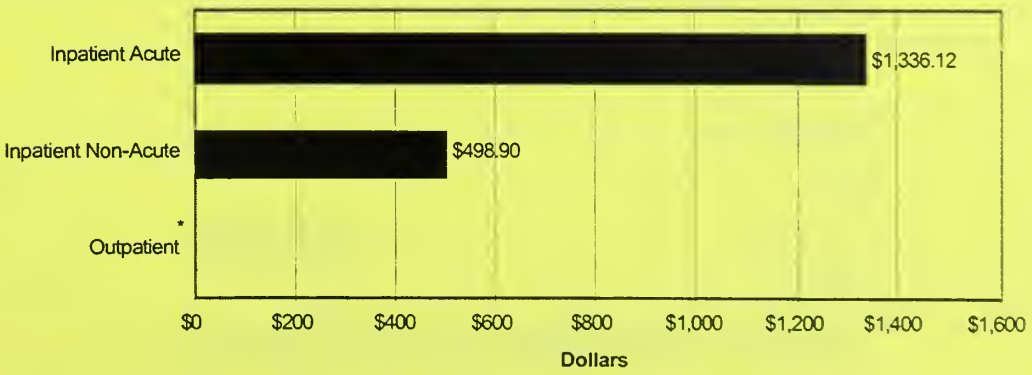
Total Spending PMPM = $148.51

Spending PMPM by Component, 1997



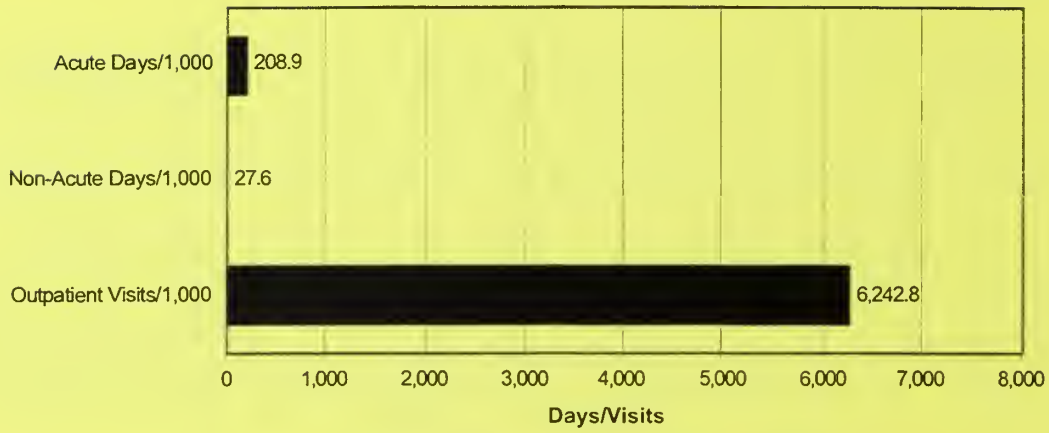
Total Spending PMPM = 148.51

Facility Cost per Day, 1997



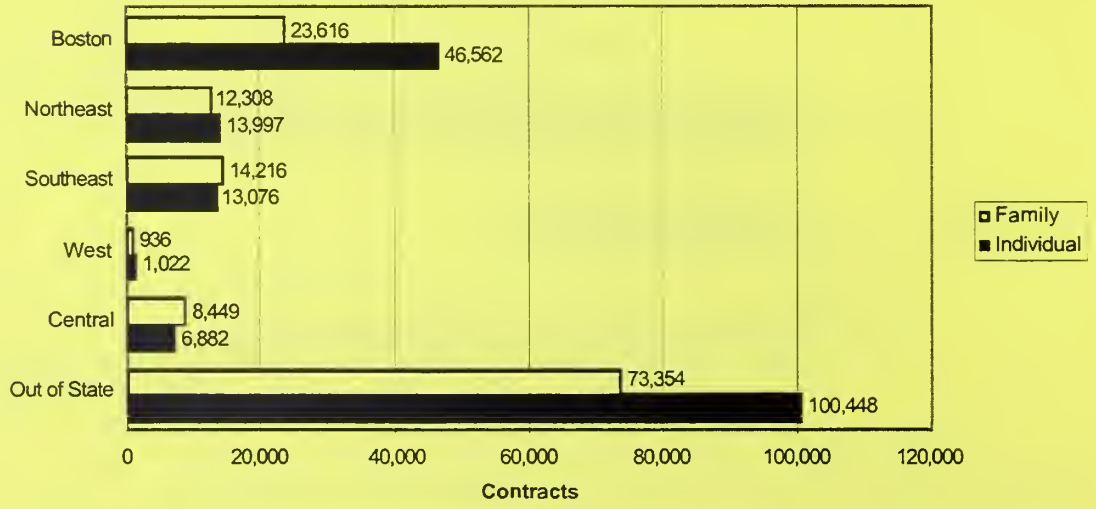
*Outpatient reflects only ambulatory surgery and emergency department facility costs.

Days/Visits per 1,000, 1997



HMO Enrollees: by Age and Gender, 1997

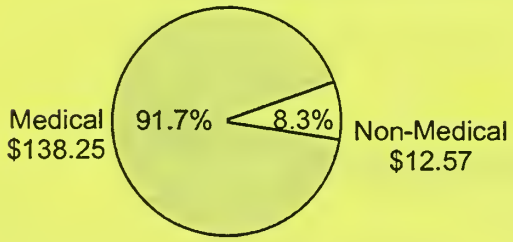
Contracts by Massachusetts Region:
Family vs. Individual, 1997



Harvard Pilgrim Health Care – Pilgrim

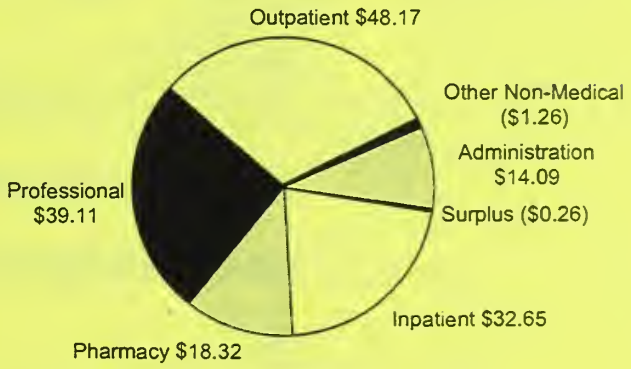
Pilgrim's total spending was 5% above the median value, primarily driven by its high level of medical spending relative to the median. Pilgrim's medical spending reveals a pattern of high pharmacy, outpatient, and inpatient spending in the presence of low spending for professional services. Its unit costs were significantly below the median for inpatient (both acute and non-acute) and outpatient services, but its utilization of acute inpatient days, non-acute hospital days, and outpatient visits was the highest of all participating HMOs. Pilgrim members filled slightly more prescriptions than the median and the cost per prescription was higher than the median. These two factors together explain Pilgrim's high level of pharmacy spending relative to the median. Pilgrim's non-medical spending was much lower than the median, due primarily to its low level of administrative spending. Of all HMOs, Pilgrim spent one of the smallest shares of its premium dollar on administrative expenditures.

Total Spending PMPM:
Medical and Non-Medical, 1997



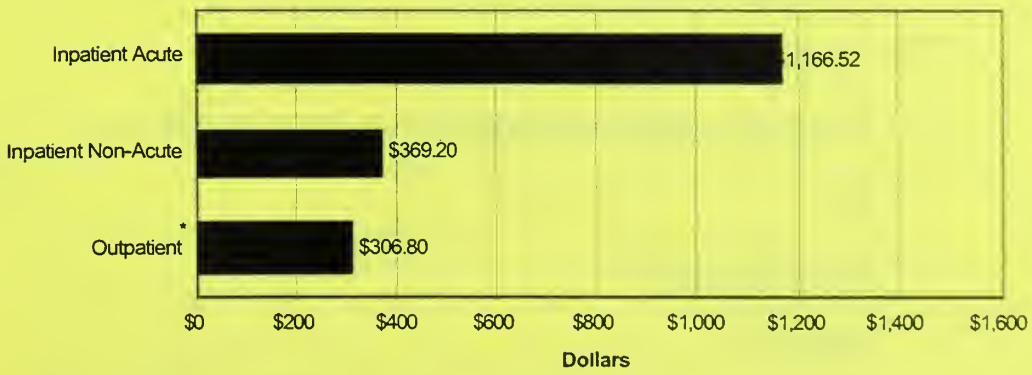
Total Spending PMPM = $150.82

Spending PMPM by Component, 1997



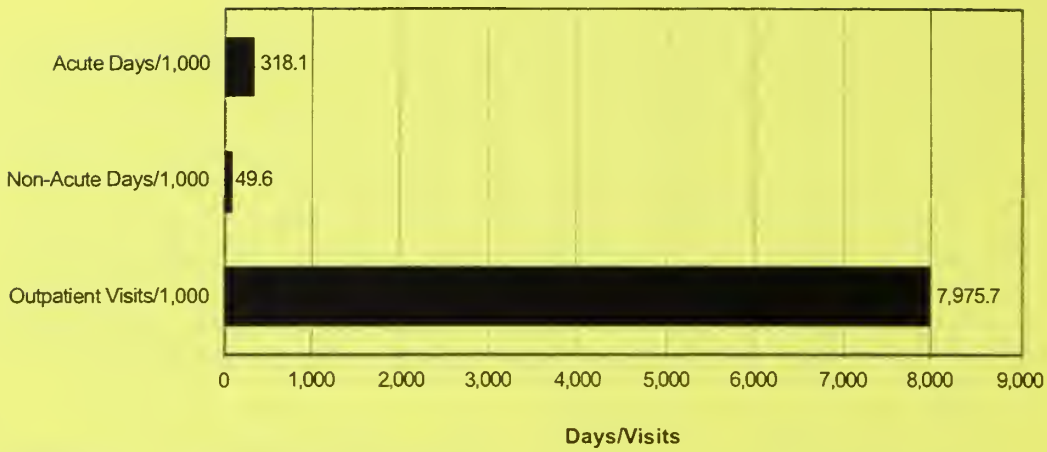
Total Spending PMPM = 150.82

Facility Cost per Day, 1997

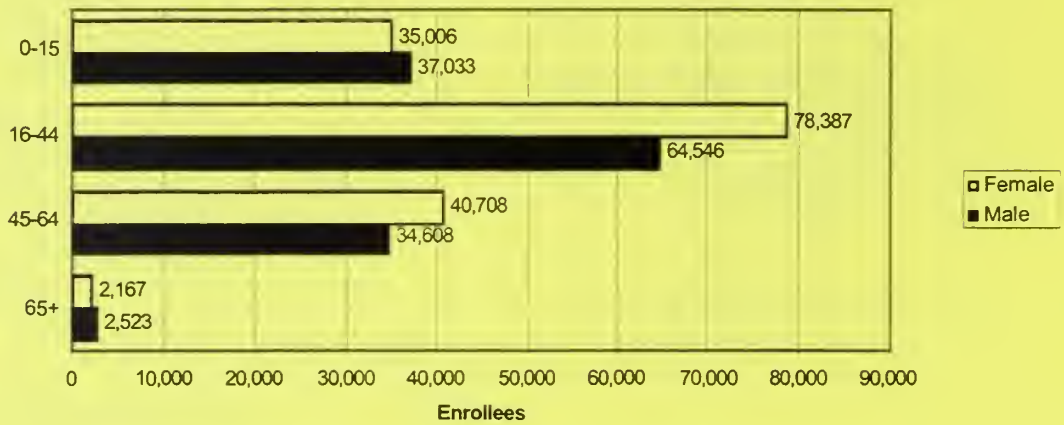


*Outpatient reflects only ambulatory surgery and emergency department facility costs.

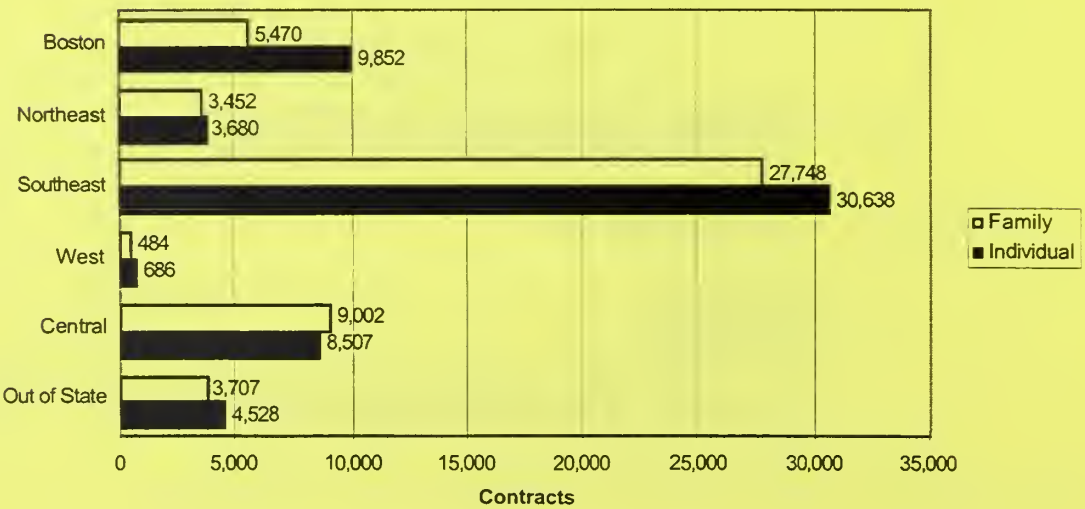
Days/Visits per 1,000, 1997



HMO Enrollees: by Age and Gender, 1997



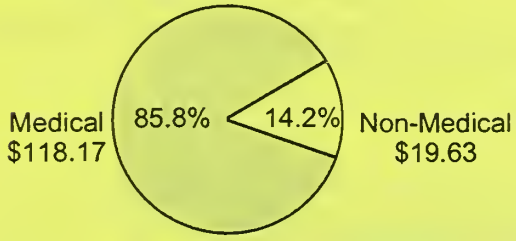
Contracts by Massachusetts Region:
Family vs. Individual, 1997



Health New England

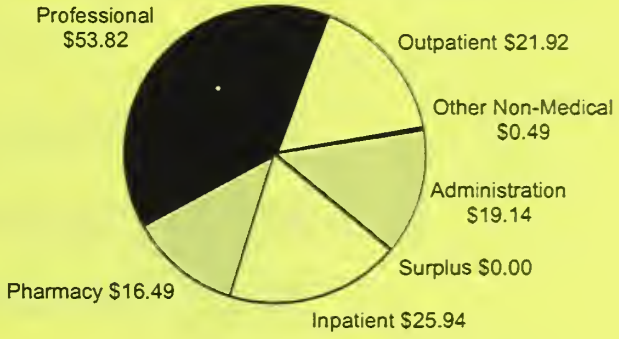
HNE's total spending was slightly lower than the median value, because its medical spending was less than the median. HNE spent slightly less than the median for inpatient and significantly less than the median for outpatient services. Its acute care inpatient utilization was 14% higher than the median, but its acute care inpatient unit costs were 7% lower than the median. The same was true for outpatient services: higher utilization but lower unit costs. Spending on professional services and prescription drugs was above the median. The higher pharmacy spending is the result of higher unit cost, because utilization was about equal to the median. The plan's non-medical spending was slightly higher than the median. HNE's administrative expenditures were 12% above the median.

Total Spending PMPM:
Medical and Non-Medical, 1997



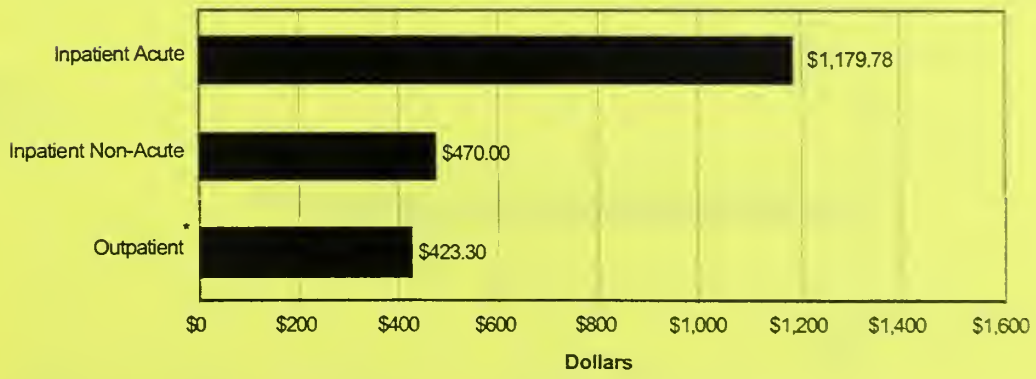
Total Spending PMPM = $137.80

Spending PMPM by Component, 1997



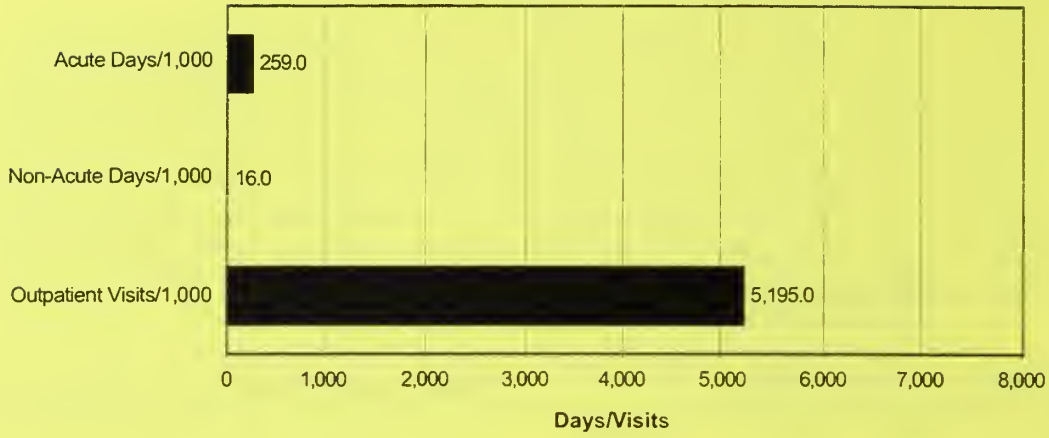
Total Spending PMPM = 137.80

Facility Cost per Day, 1997

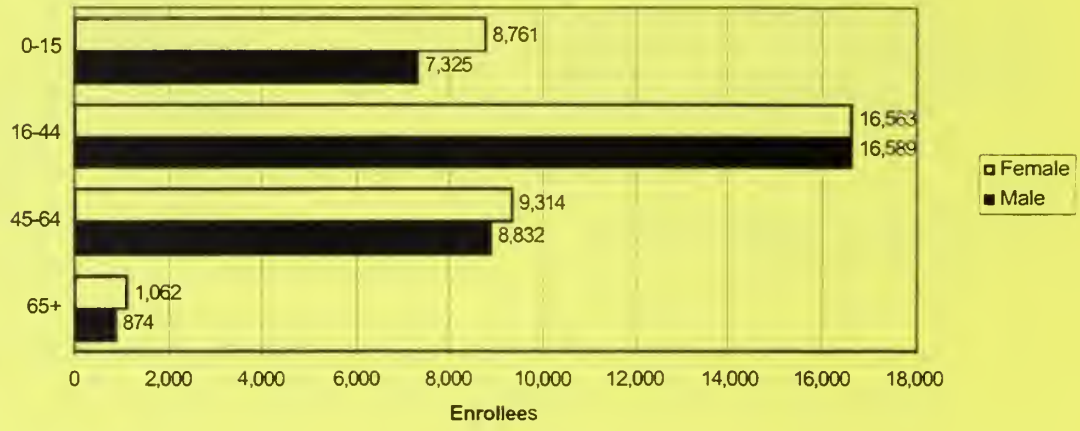


*Outpatient reflects only ambulatory surgery and emergency department facility costs.

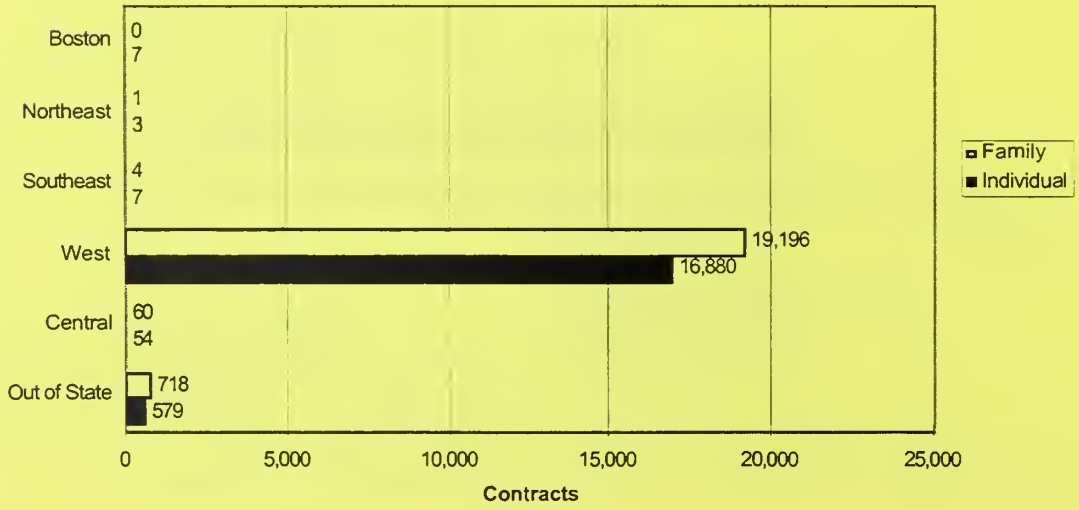
Days/Visits per 1,000, 1997



HMO Enrollees: by Age and Gender, 1997



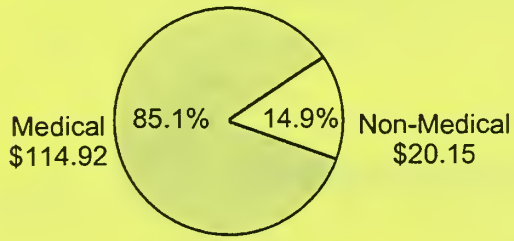
Contracts by Massachusetts Region: Family vs. Individual, 1997



Healthsource Massachusetts

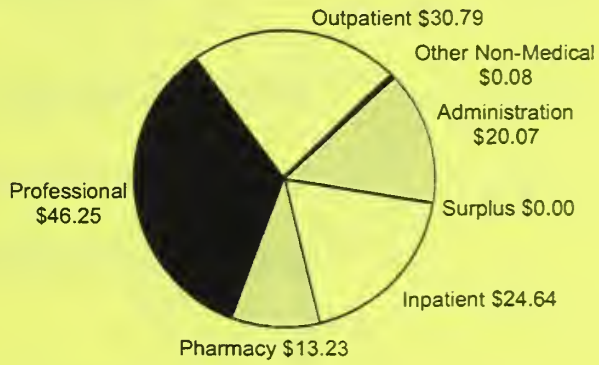
HS-MA's overall spending was 6% lower than the median value. The plan spent less than most plans for medical care and slightly more for non-medical expenses. HS-MA spent less per unit of service for non-acute care inpatient and outpatient care than the median. Its acute care inpatient costs per day equaled the median. The plan also used fewer inpatient and outpatient services than the median, with one notable exception. HS-MA used significantly more non-acute inpatient days than the median. Low rates of outpatient and acute care inpatient utilization, combined with low costs per unit of service, resulted in lower than median levels of spending across medical categories. Inpatient spending was 8% less than the median, outpatient spending was 7% below, professional spending was 5% below, and spending pharmacy was 15% below. HS-MA's administrative expenditures were 18% above the median.

Total Spending PMPM: Medical and Non-Medical, 1997



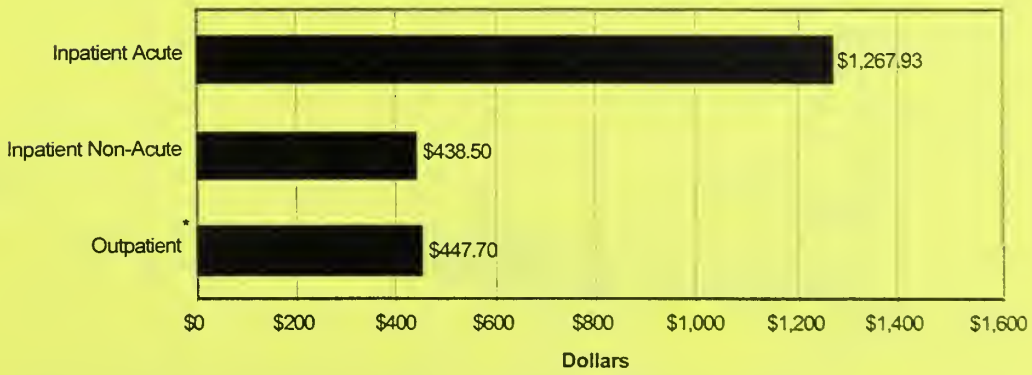
Total Spending PMPM = $135.07

Spending PMPM by Component, 1997



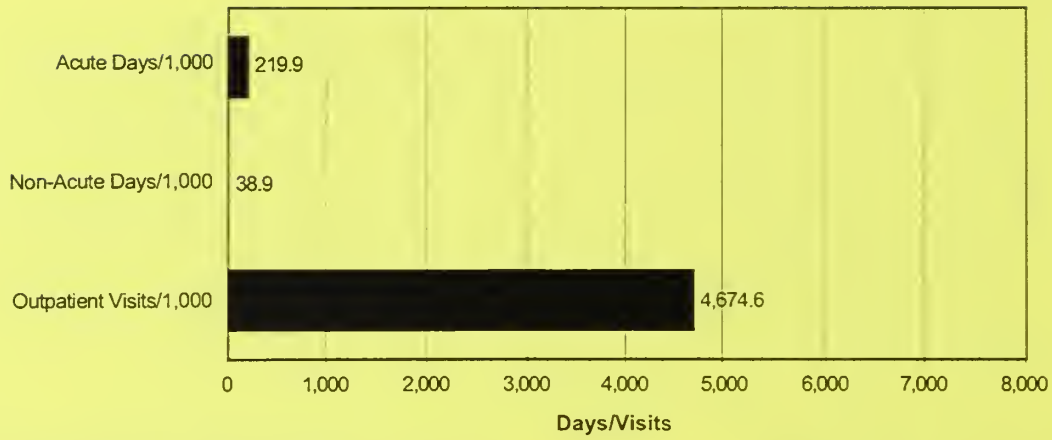
Total Spending PMPM = 135.07

Facility Cost per Day, 1997

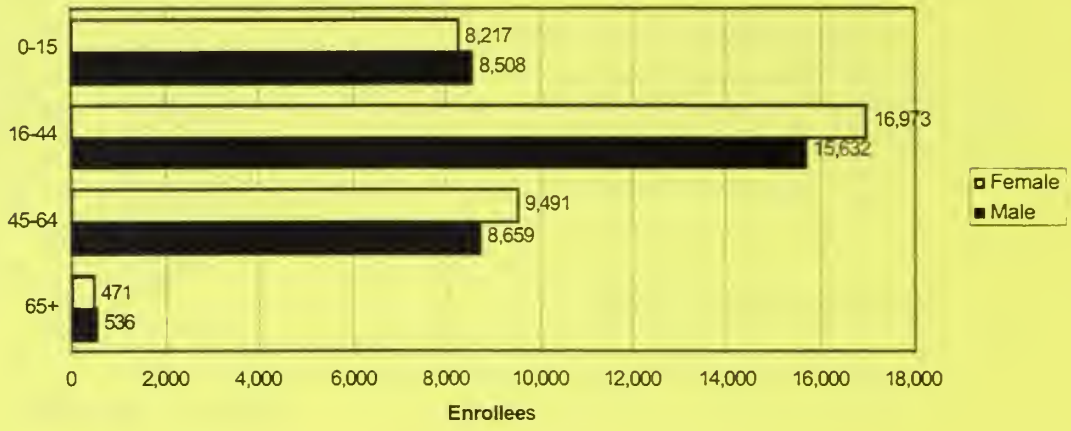


*Outpatient reflects only ambulatory surgery and emergency department facility costs.

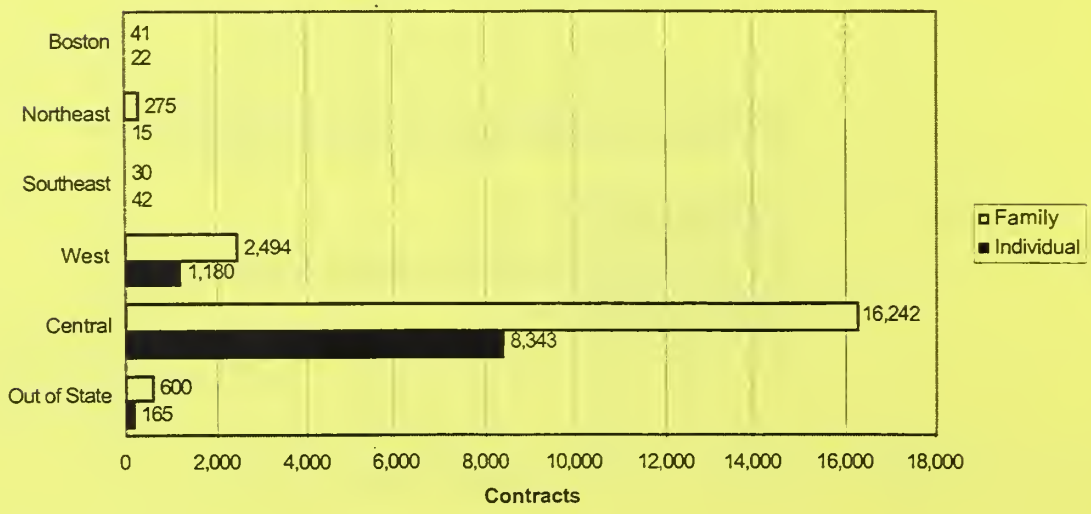
Days/Visits per 1,000, 1997



HMO Enrollees: by Age and Gender, 1997



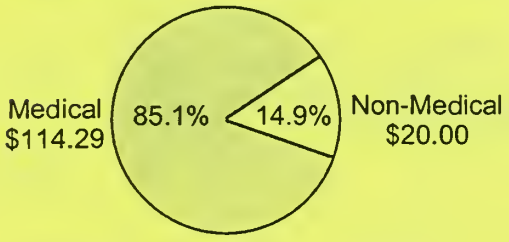
Contracts by Massachusetts Region: Family vs. Individual, 1997



Healthsource New Hampshire

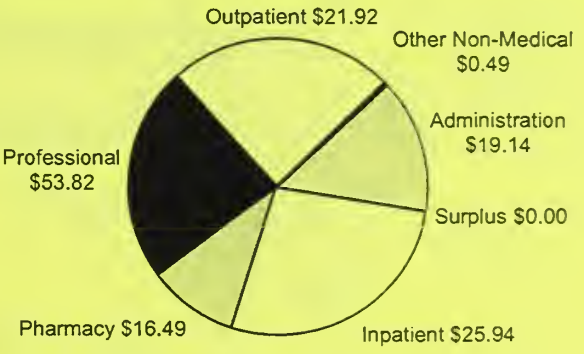
HS-NH's total spending was 6% lower than the median value. Even though the plan's inpatient spending was almost 40% above the median, HS-NH still spent less on medical services than most other plans. Lower medical spending appears to have been driven by unusually low levels of spending on professional services. HS-NH was unable to provide inpatient and outpatient utilization data for 1997. But its reported unit costs per inpatient hospital day were significantly below the median. One possible explanation for the high inpatient spending is that HS-NH members spent significantly more days in the hospital than members of other plans or had more frequent admissions. Conversely, its unit costs per outpatient visit were significant above the median. Since outpatient spending equaled the median, this suggests that utilization of outpatient services was less than the median. Because HS-NH members filled fewer prescriptions per year than the median, the plan's pharmacy costs were among the lowest in this report as well. US-NH's non-medical spending was 9% above the median. Administrative expenditures were 17% above.

Total Spending PMPM:
Medical and Non-Medical, 1997



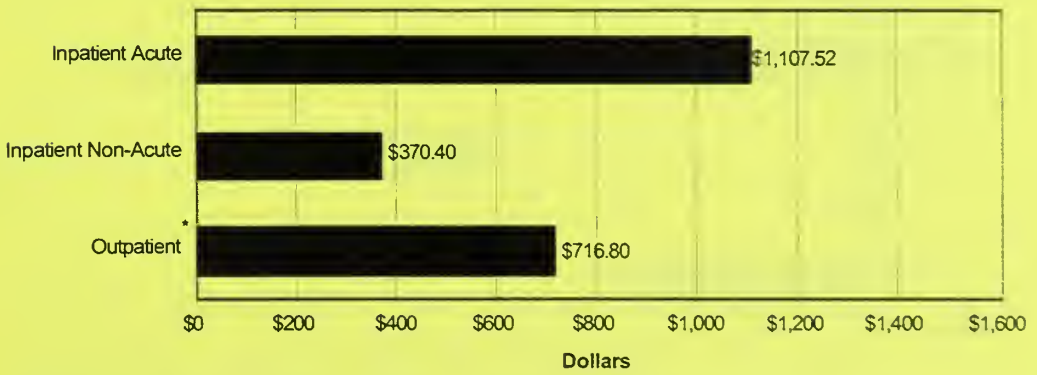
Total Spending PMPM = $134.29

Spending PMPM by Component, 1997



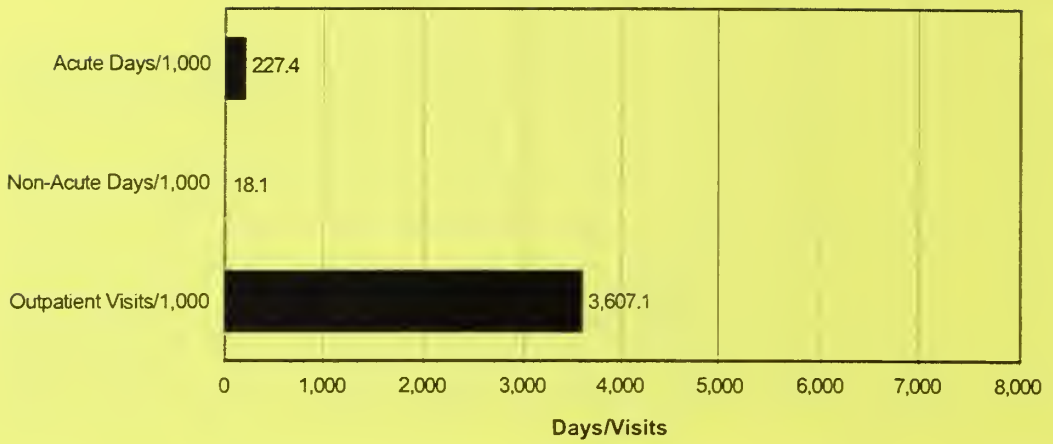
Total Spending PMPM = 134.29

Facility Cost per Day, 1997



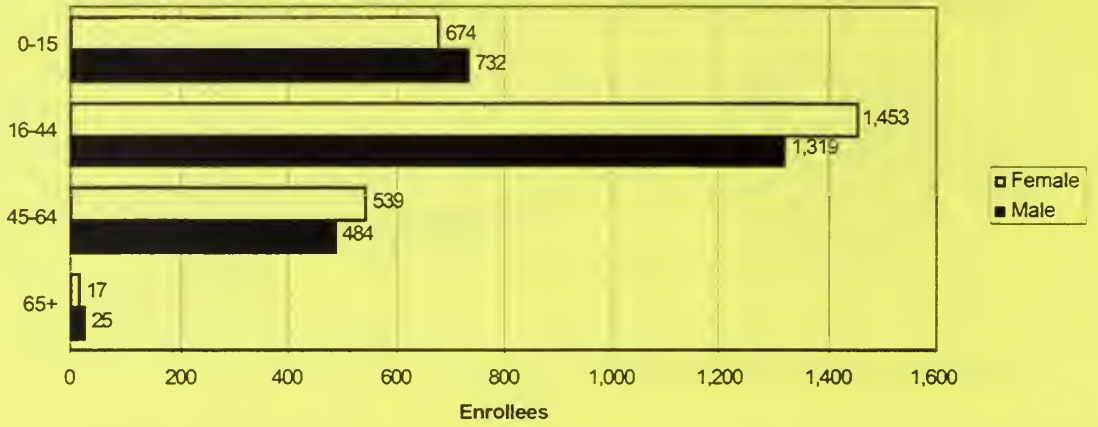
*Outpatient reflects only ambulatory surgery and emergency department facility costs.

Days/Visits per 1,000, 1997

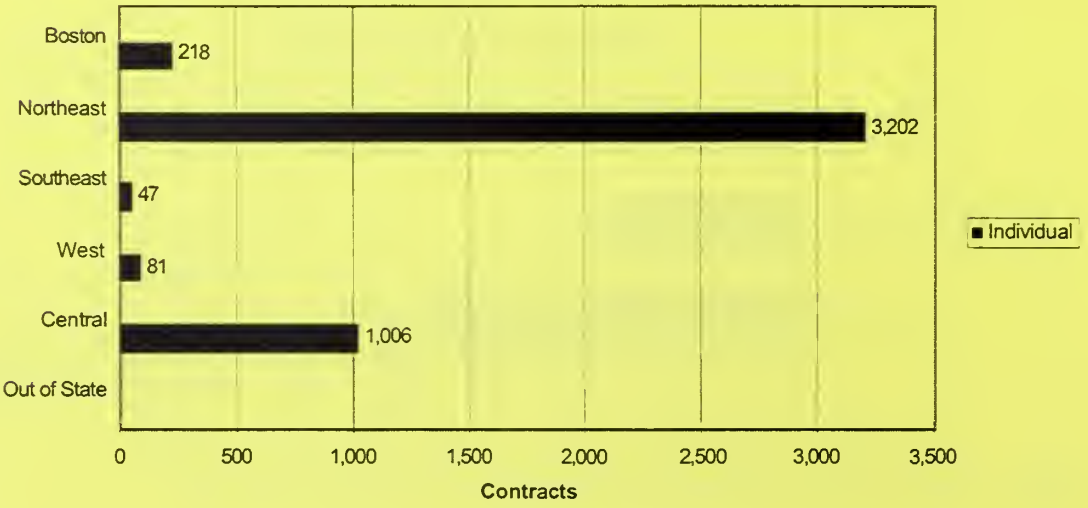


NS-NH 1997 utilization levels not available. 1996 utilization levels shown.

HMO Enrollees: by Age and Gender, 1997



Contracts by Massachusetts Region: Family vs. Individual, 1997

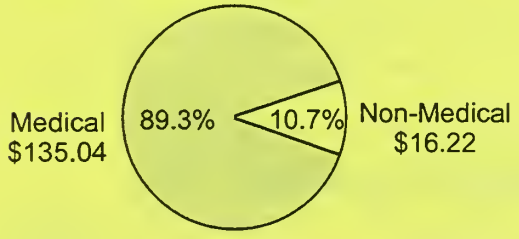


NS-NH family

Matthew Thornton Health Plan

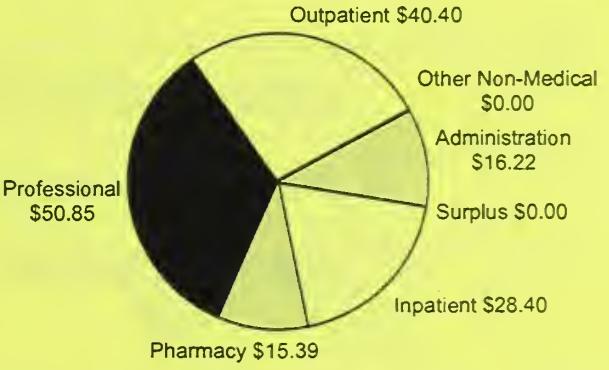
MTHP's total spending exceeded the median because its medical spending was 8% above the median. The plan's medical spending was above the median values for inpatient, outpatient and professional services, and slightly less than the median for pharmacy spending. Although the utilization of inpatient and outpatient services was lower than the median values, MTHP paid significantly more per unit of care for these services than other plans. Unit costs for acute care inpatient services were 20% above the median and, for outpatient visits, 29% greater than the median. MTHP filled slightly fewer prescriptions per member month than the other plans, but paid slightly more for each of those prescriptions. The plan's non-medical spending was 11% below the median and its administrative expenses were 5% below the median.

Total Spending PMPM:
Medical and Non-Medical, 1997



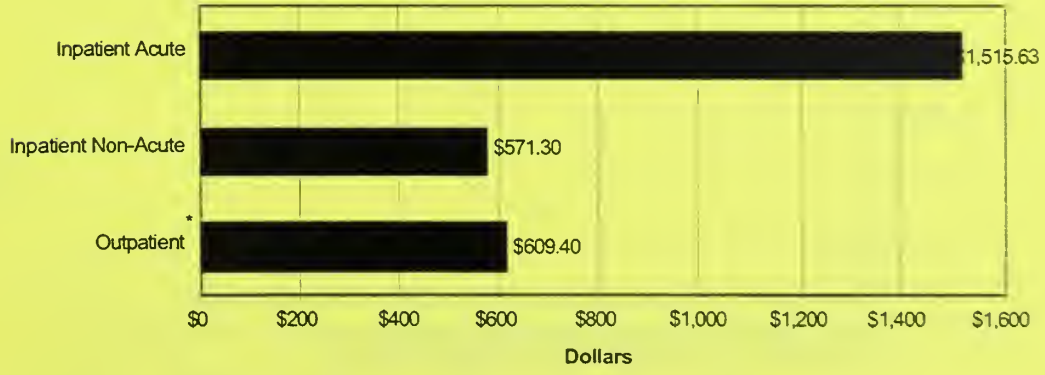
Total Spending PMPM = $151.26

Spending PMPM by Component, 1997



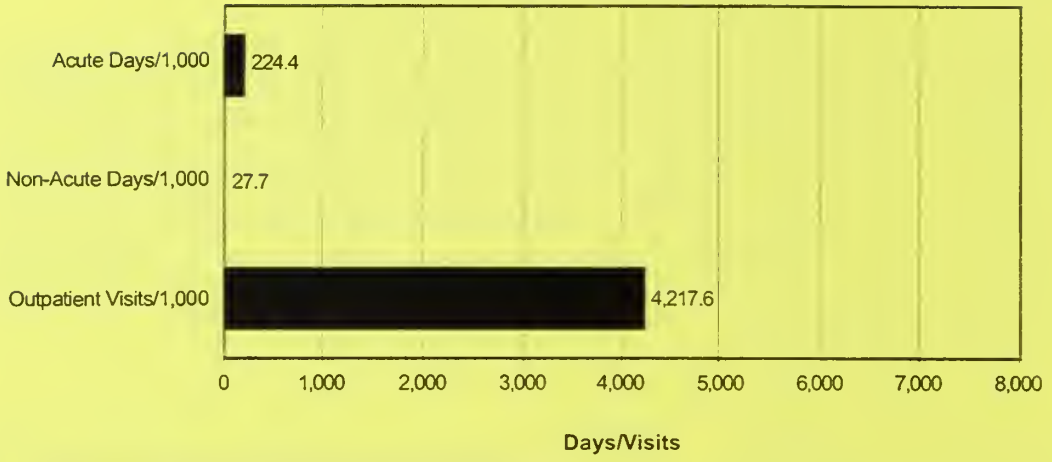
Total Spending PMPM = 151.26

Facility Cost per Day, 1997

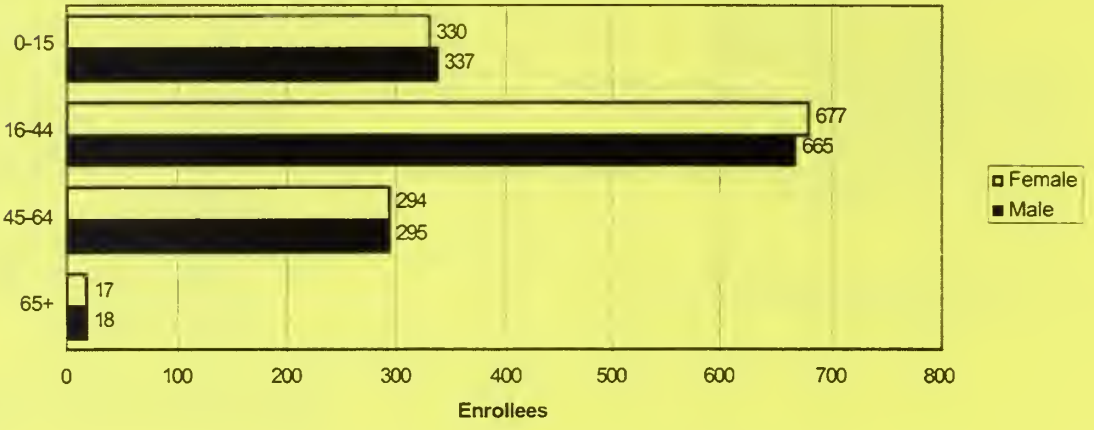


*Outpatient reflects only ambulatory surgery and emergency department facility costs.

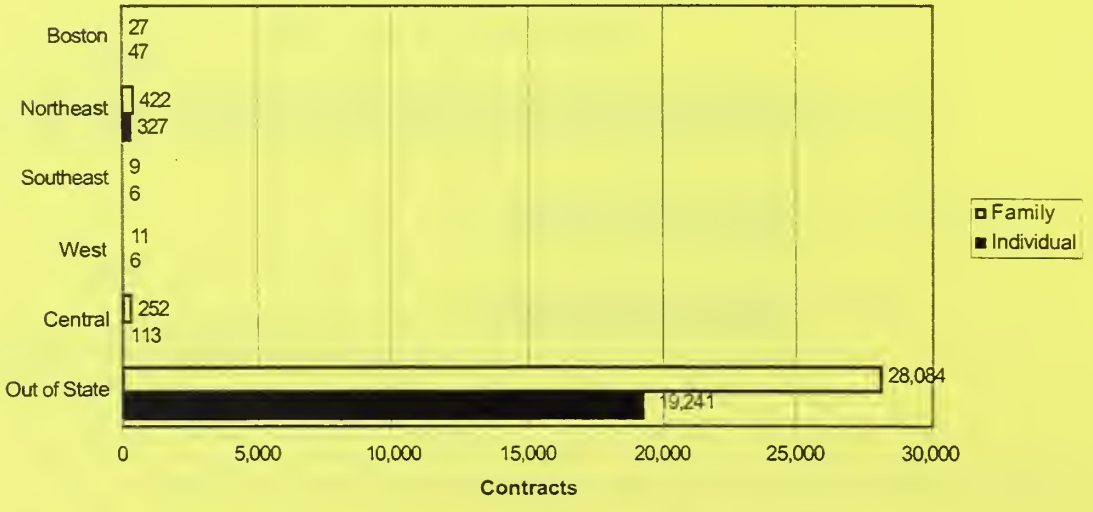
Days/Visits per 1,000, 1997



HMO Enrollees: by Age and Gender, 1997



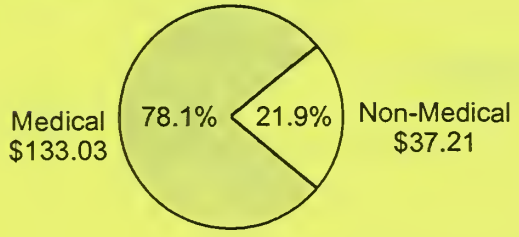
Contracts by Massachusetts Region:
Family vs. Individual, 1997



Neighborhood Health Plan

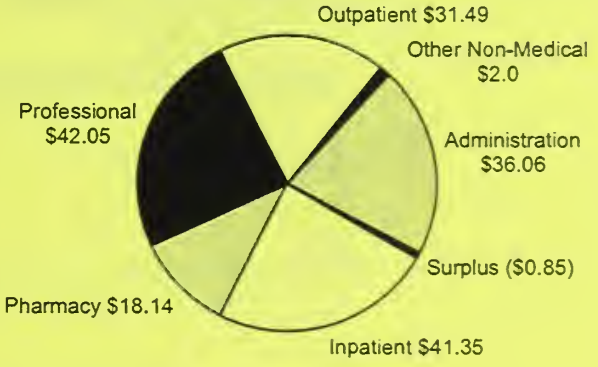
NHP's total spending was almost 20% higher than the median. Most of the difference was due to non-medical spending, especially administration, which was more than double the median. NHP's medical spending was only 7% higher than the median. NHP spent more per member per month than all other plans on inpatient services. In contrast, the plan spent slightly less for outpatient services. NHP had the highest rate of inpatient utilization (including both acute and non-acute) of all HMOs. The plan used significantly more office visits than other plans as well. But NHP paid hospitals and outpatient facilities less than the median rate per day. The plan spent less than the median on professional services as well, suggesting low physician fees. NHP members filled 8.2 prescriptions per year, slightly less than the median of 8.4. The average cost of each prescription was roughly equivalent to the median. Differences in outpatient and inpatient pharmacy costs and utilization may explain higher than median plan spending for pharmacy services. Overall pharmacy spending per member month includes only outpatient prescriptions, while unit costs and utilization include both outpatient and inpatient prescriptions.

Total Spending PMPM:
Medical and Non-Medical, 1997



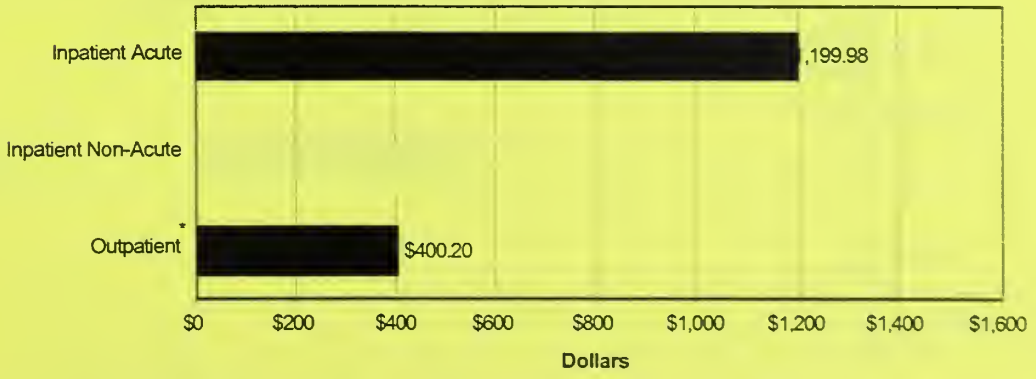
Total Spending PMPM = $170.24

Spending PMPM by Component, 1997



Total Spending PMPM = 170.24

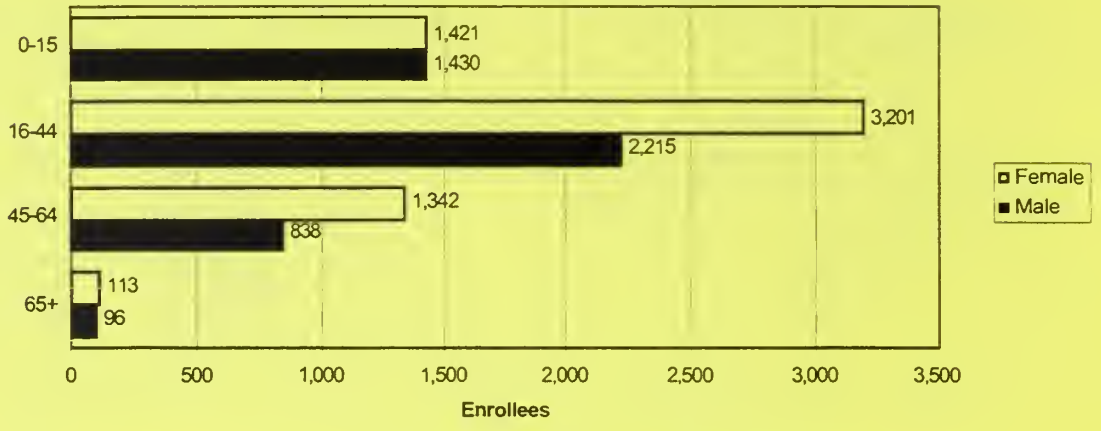
Facility Cost per Day, 1997



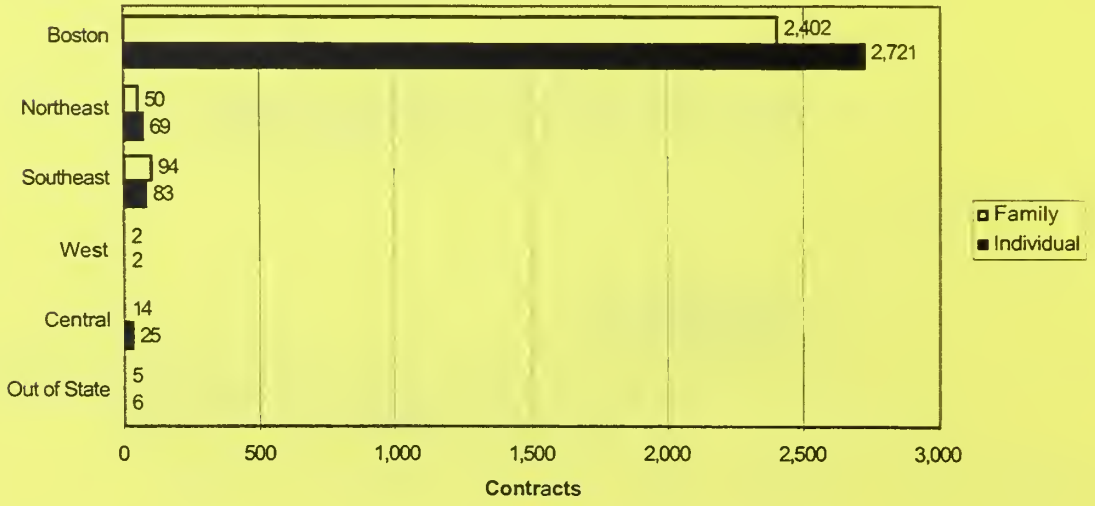
*Outpatient reflects only ambulatory surgery and emergency department facility costs.

Days/Visits per 1,000, 1997

HMO Enrollees: by Age and Gender, 1997



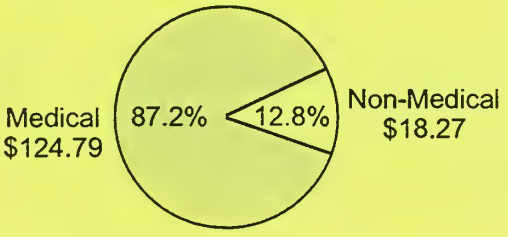
Contracts by Massachusetts Region: Family vs. Individual, 1997



Tufts Associated Health Plans

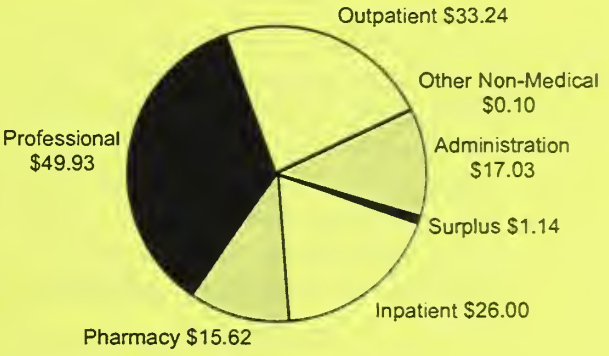
Tufts' overall spending was equal to the median value. Its medical and non-medical components equaled the median values as well. Moreover, the plan did not deviate from the median for any of its major spending categories by more than 3%. Tufts' inpatient unit costs for acute care were 5% higher than the median. But its utilization of acute care inpatient services was 6% lower. Similarly, Tufts exhibited higher unit costs and lower utilization of non-acute inpatient services. The utilization of outpatient visits equaled the median. But unit costs for outpatient services were significantly lower than the median. Tufts spent slightly more than the median for pharmacy, but filled slightly fewer prescriptions per year than the median and paid slightly more for each of those prescriptions.

Total Spending PMPM:
Medical and Non-Medical, 1997



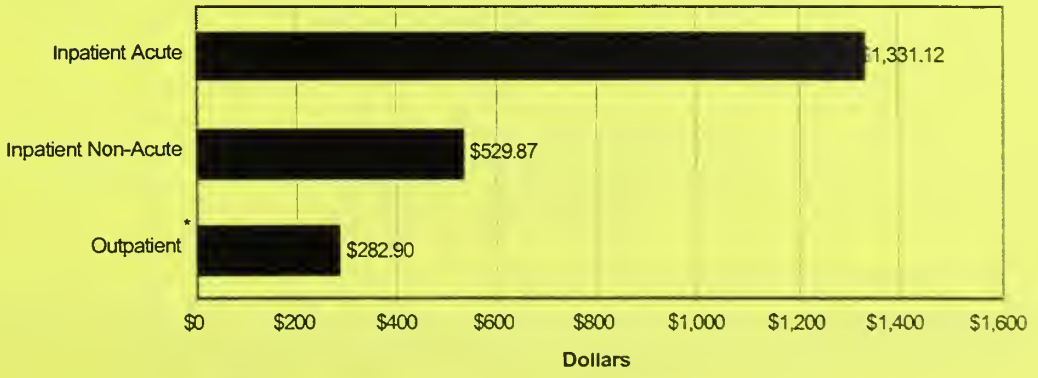
Total Spending PMPM = $143.06

Spending PMPM by Component, 1997

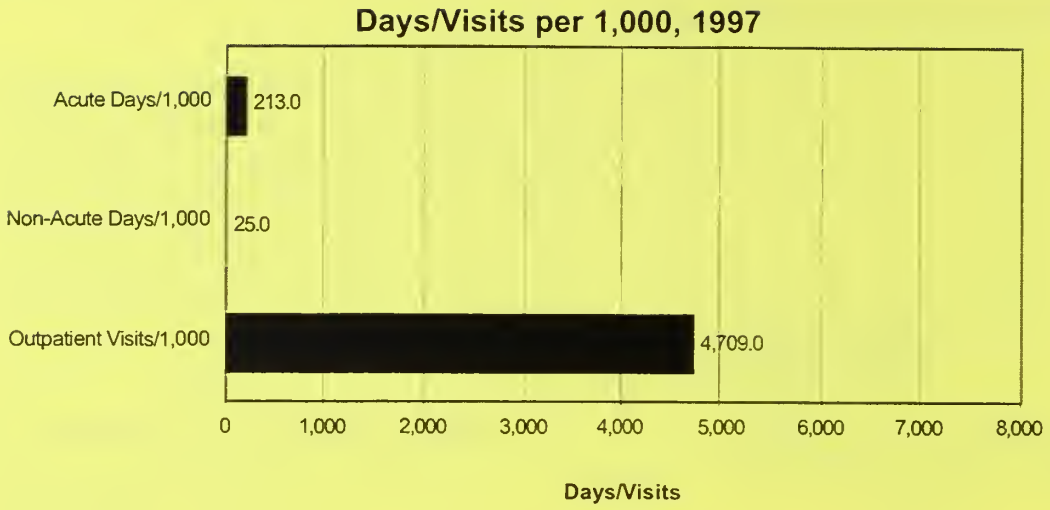


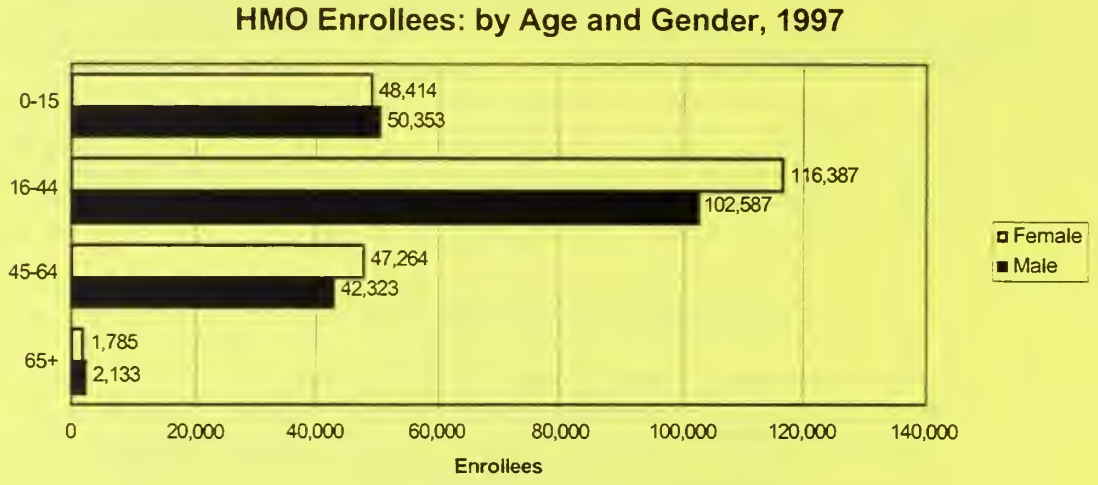
Total Spending PMPM = 1343.06

Facility Cost per Day, 1997



*Outpatient reflects only ambulatory surgery and emergency department facility costs.





Tufts was unable to provide contract information

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Division of Health Care Finance and Policy
Two Boylston Street
Boston, Massachusetts 02116
(617) 988-3100

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Division of Health Care Finance and Policy
Office of Communications
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